



DULUTH, GA - PEACHTREE INDUSTRIAL BLVD

TRT ID: 27314

SITE ADDRESS:

2220 PEACHTREE INDUSTRIAL BLVD

DULUTH, GA 30097



3500 DEER CREEK ROAD
PALO ALTO, CA 94304
(650) 681-5000



Dewberry Engineers Inc.
2835 BRANDYWINE ROAD
SUITE 100
ATLANTA, GA 30341-4015
PHONE: 678.530.002
GA LIC. NO. PEF002398 (6/30/2024)



SITE INFORMATION	APPLICABLE CODES	PROJECT DESCRIPTION	ZONING INFORMATION	DRAWING INDEX	
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PROPOSED TESLA EV SITE ADDRESS:
2220 PEACHTREE INDUSTRIAL BLVD
DULUTH, GA 30097

PROPERTY OWNER:
SRA/SUGARLOAF MARKETPLACE LLC
5345 PINE TREE DR
MIAMI, FL 33140

PARCEL ID:
PARCEL ID: R7205 032

POWER COMPANY:
GEORGIA POWER
CONTACT: MICHAEL BUSSMAN
EMAIL: MBUSSMAN@SOUTHERNCO.COM
WORK ORDER: TBD

COUNTY:
GWINNETT COUNTY

LATITUDE*:
34° 01' 14.87" N

LONGITUDE*:
84° 07' 11.29" W
*BASED ON GOOGLE EARTH

CONTACT ENGINEER:
MATTHEW SELKIRK, P.E.
DEWBERRY ENGINEERS INC.
(804) 205-3361
mselkirk@dewberry.com

ALL WORK SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES:
GEORGIA STATE UNIFORM BUILDING & ENERGY CODES, CONSISTENT WITH THE FOLLOWING CODES:

2018 INTERNATIONAL BUILDING CODE (IBC) WITH GEORGIA AMENDMENTS (2020)
2015 INTERNATIONAL ENERGY CONSERVATION CODE (IECC) WITH GEORGIA SUPPLEMENTS & AMENDMENTS (2020)
2020 NATIONAL ELECTRIC CODE (NEC).

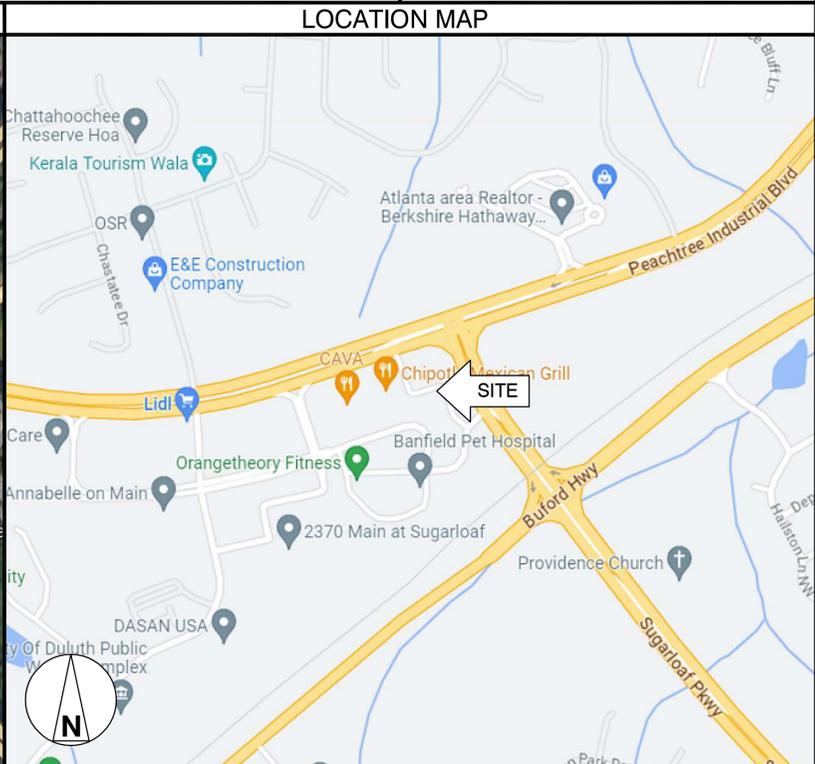
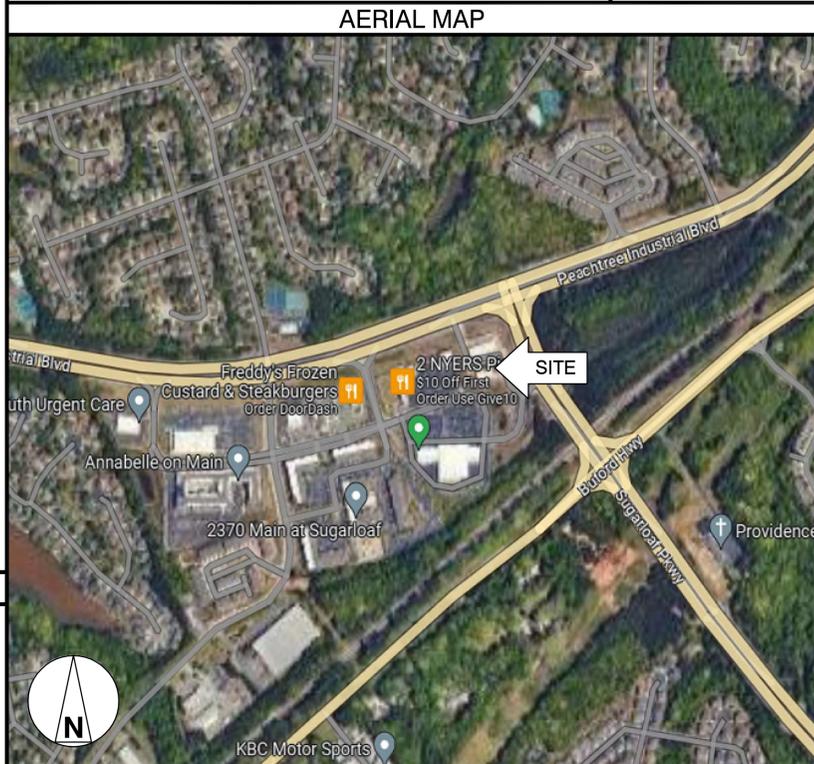
IN THE EVENT OF CONFLICT, THE MOST RESTRICTIVE CODE SHALL PREVAIL.

- INSTALL PAD MOUNTED UTILITY TRANSFORMER
- INSTALL (1) 1600A SWITCHGEAR
- INSTALL (3) TESLA SUPERCHARGER CABINETS
- INSTALL (12) TESLA STANDALONE CHARGE POSTS

PERMITTING JURISDICTION: CITY OF DULUTH
APN: R7205 032

SHT. NO.	SHEET TITLE
T-1	TITLE SHEET
GN-1	GENERAL NOTES I
GN-2	GENERAL NOTES II
C-1	DETAILED SITE PLAN
C-2	EXISTING CONDITIONS PLAN
C-3	EQUIPMENT/PARKING PLAN
C-4	GRADING PLAN
C-5	CONSTRUCTION DETAILS I
C-6	CONSTRUCTION DETAILS II
C-7	CONSTRUCTION DETAILS III
C-8	CONSTRUCTION DETAILS IV
E-1	ELECTRICAL ONE-LINE DIAGRAM
E-2	ELECTRICAL & UTILITY DETAILS
E-3	ARC FLASH LABELS
G-1	GROUNDING PLAN, SCHEMATIC & DETAILS

DRAWN BY:	WG
CHECKED BY:	DSW
APPROVED BY:	MCS
PROJECT #:	50123704
JOB #:	50163344



CONTRACTOR NOTE

CONTRACTOR SHALL COMPLETE INSTALL PER THE SIGNED AND SEALED SET OF DRAWINGS. ANY NECESSARY DEVIATIONS FROM THE DRAWINGS MUST BE SUBMITTED THROUGH AN RFI REQUEST PROCESS WITH ENGINEERING FOR AN APPROVAL PRIOR TO CONTRACTOR PROCEEDING WITH A DEVIATION OF THE SIGNED AND SEALED SET OF DRAWINGS.

SUBMITTALS		
REV.	DATE	DESCRIPTION
0	05/26/23	ISSUED FOR S&S
B	05/17/23	ISSUED FOR 90% REVIEW
A	05/09/23	ISSUED FOR 90% REVIEW

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BEFORE SCALING

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE TESLA REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

CALL BEFORE YOU DIG

GEORGIA 811
811 OR 1-800-282-7411

Contact 811 before you dig.

SHEET TITLE	TITLE SHEET
SHEET NUMBER	T-1

ELECTRICAL NOTES:

- THE GENERAL CONTRACTOR SHALL SUPPLY AND INSTALL ANY/ALL ELECTRICAL WORK INDICATED. ANY/ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH DRAWINGS. ANY/ALL APPLICABLE SPECIFICATIONS. IF ANY PROBLEMS ARE ENCOUNTERED BY COMPLYING WITH THESE REQUIREMENTS, SUB-CONTRACTOR SHALL NOTIFY THE PROJECT HOST AS SOON AS POSSIBLE, AFTER THE DISCOVERY OF THE PROBLEMS, AND SHALL NOT PROCEED WITH THAT PORTION OF WORK, UNTIL THE PROJECT HOST HAS DIRECTED THE CORRECTIVE ACTIONS TO BE TAKEN.
- THE GENERAL CONTRACTOR SHALL VISIT THE JOB SITE AND FAMILIARIZE HIMSELF WITH ANY/ALL CONDITIONS AFFECTING ELECTRICAL AND COMMUNICATION INSTALLATION AND MAKE PROVISIONS AS TO THE COST THEREOF. ALL EXISTING CONDITIONS OF ELECTRICAL EQUIPMENT, LIGHT FIXTURES, ETC., THAT ARE PART OF THE FINAL SYSTEM, SHALL BE VERIFIED BY THE SUB-CONTRACTOR, PRIOR TO THE SUBMITTAL OF HIS BID. FAILURE TO COMPLY WITH THIS PARAGRAPH WILL IN NO WAY RELIEVE THE SUBCONTRACTOR OF PERFORMING ALL WORK NECESSARY FOR A COMPLETE AND WORKING SYSTEM.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE NEC AND ALL CODES AND LOCAL ORDINANCES OF THE LOCAL POWER COMPANIES HAVING JURISDICTION AND SHALL INCLUDE BUT NOT BE LIMITED TO:
 - A. UL – UNDERWRITERS LABORATORIES
 - B. NEC – NATIONAL ELECTRICAL CODE
 - C. NEMA – NATIONAL ELECTRICAL MANUFACTURERS ASSOC.
 - D. OSHA – OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
 - E. SBC – STANDARD BUILDING CODE
 - F. NFPA – NATIONAL FIRE PROTECTION ASSOCIATION
- DO NOT SCALE ELECTRICAL DRAWINGS, REFER TO SITE PLANS AND ELEVATIONS FOR EXACT LOCATIONS OF ALL EQUIPMENT, AND CONFIRM WITH ENGINEER ANY SIZES AND LOCATIONS WHEN NEEDED.
- EXISTING SERVICES: THE GENERAL CONTRACTOR SHALL NOT INTERRUPT EXISTING SERVICES WITHOUT WRITTEN PERMISSION OF THE PROJECT HOST.
- THE GENERAL CONTRACTOR SHALL PAY FOR ANY/ALL PERMITS, FEES, INSPECTIONS AND TESTING. THE GENERAL CONTRACTOR IS TO OBTAIN PERMITS AND APPROVED SUBMITTALS PRIOR TO THE WORK BEGINNING OR ORDERING EQUIPMENT.
- THE TERM "PROVIDE" USED IN CONSTRUCTION DOCUMENTS AND SPECIFICATIONS, INDICATES THAT THE CONTRACTOR SHALL FURNISH AND INSTALL, UNLESS OTHERWISE SPECIFIED BY CONSTRUCTION MANAGER OR BY PROJECT DEVELOPER.
- THE GENERAL CONTRACTOR SHALL CONFIRM WITH LOCAL UTILITY COMPANY ANY/ALL REQUIREMENTS SUCH AS THE: LUG SIZE RESTRICTIONS, CONDUIT ENTRY, SIZE OF TRANSFORMERS, SCHEDULED DOWNTIME FOR THE PROJECT HOST'S CONFIRMATION, ETC. ANY/ALL CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER, PRIOR TO BEGINNING ANY WORK.
- CONDUCTORS: THE CONTRACTOR SHALL USE 98% CONDUCTIVITY COPPER OR ALUMINUM WITH TYPE (THWN-2) INSULATION, 600 VOLT, COLOR CODED UNLESS SPECIFIED DIFFERENTLY ON DRAWINGS.
- ALL (THWN-2) WIRING INSTALLATIONS TO FOLLOW MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.
- OUTLET BOXES SHALL BE PRESSED STEEL IN DRY LOCATIONS, CAST ALLOY WITH THREADED HUBS IN WET/DAMP LOCATIONS AND SPECIAL ENCLOSURES FOR OTHER CLASSIFIED AREAS.
- IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF THE CONSTRUCTION. CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS FOR THE EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER. SUB-CONTRACTOR IS TO PROVIDE ALL ELECTRICAL EQUIPMENT UNLESS OTHERWISE DIRECTED.
- ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL SUB-CONTRACTOR IN A FIRST CLASS, WORKMANLIKE MANNER, THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND SUBJECT TO REGULATORY INSPECTION AND APPROVAL BY THE CONSTRUCTION MANGER.
- ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.
- THE GENERAL CONTRACTOR SHALL GUARANTEE ANY/ALL MATERIALS AND WORK FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE YEAR FROM DATE OF ACCEPTANCE.
- THE CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ANY ADDITIONAL CHARGE AND SHALL INCLUDE THE REPLACEMENT OR THE REPAIR OF ANY OTHER PHASE OF THE INSTALLATION, WHICH MAY HAVE BEEN DAMAGED THEREIN.
- ADEQUATE AND REQUIRED LIABILITY INSURANCE SHALL BE PROVIDED FOR PROTECTION AGAINST PUBLIC LOSS AND ANY/ALL PROPERTY DAMAGE FOR THE DURATION OF WORK.
- MATERIALS, PRODUCTS AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW AND SHALL APPEAR ON THE LIST OF U.L. APPROVED ITEMS AND SHALL MEET OR EXCEED THE REQUIREMENTS OF THE NEC, NEMA AND IEEE.
- GENERAL CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OR MANUFACTURES CATALOG INFORMATION OF ANY/ALL LIGHTING FIXTURES, SWITCHES AND ALL OTHER ELECTRICAL ITEMS FOR APPROVAL BY THE CONSTRUCTION MANAGER PRIOR TO INSTALLATION.
- ANY CUTTING OR PATCHING DEEMED NECESSARY FOR ELECTRICAL WORK IS THE CONTRACTOR(S) RESPONSIBILITY AND SHALL BE INCLUDED IN THE COST FOR WORK AND PERFORMED TO THE SATISFACTION OF THE CONSTRUCTION MANAGER UPON FINAL ACCEPTANCE.
- THE SUBCONTRACTOR SHALL LABEL ALL PANELS WITH ONLY TYPEWRITTEN DIRECTORIES.
- DISCONNECT SWITCHES SHALL BE H.P. RATED HEAVY-DUTY, QUICK-MAKE AND QUICK-BREAK ENCLOSURES, AS REQUIRED BY EXPOSURE TYPE.
- ALL CONNECTIONS SHALL BE MADE WITH A PROTECTIVE COATING OF AN ANTI-OXIDE COMPOUND SUCH AS "NOALOX" BY IDEAL INDUSTRIAL INC. COAT ALL WIRE SURFACES BEFORE CONNECTING. EXPOSED ALUMINUM & COPPER SURFACES, INCLUDING GROUND BARS, SHALL BE TREATED – NO SUBSTITUTIONS.
- ALL EXTERIOR AND INTERIOR ABOVE GROUND CONDUIT SHALL BE RIGID GALVANIZED STEEL UNLESS SPECIFIED OTHERWISE. RACEWAYS: ALL CONDUITS SHALL BE SCHEDULE 40 EMT MEETING OR EXCEEDING NEMA TC2 – 1990 UNLESS SPECIFIED OTHERWISE. THE SUB-CONTRACTOR SHALL PLUG AND CAP EACH END OF SPARE AND EMPTY CONDUITS AND PROVIDE TWO SEPARATE PULL STRINGS – 200 LBS TEST POLYETHYLENE CORD. ALL CONDUIT BENDS SHALL BE A MINIMUM OF 3 FT. RADIUS. EMT CONDUITS WHEN SPECIFIED, SHALL MEET UL-6 FOR GALVANIZED STEEL. ALL FITTINGS SHALL BE SUITABLE FOR USE WITH THREADED RIGID CONDUIT. COAT ALL THREADS WITH 'BRITE ZINC' OR 'GOLD GALV'.

- SUPPORT OF ALL ELECTRICAL WORK SHALL BE AS REQUIRED BY NEC.
- CONNECTORS FOR POWER CONDUCTORS: SUB-CONTRACTOR SHALL USE PRESSURE TYPE INSULATED TWIST-ON CONNECTORS FOR NO. 10 AWG AND SMALLER. USE SOLDERLESS MECHANICAL TERMINAL LUGS FOR NO. 8 AWG AND LARGER.
- THE SUB-CONTRACTOR SHALL PLACE TWO LENGTHS OF WARNING TAPE AT A DEPTH OF 12" BELOW GROUND AND DIRECTLY ABOVE ELECTRICAL SERVICE CONDUITS. CAUTIONS TAPE TO READ "CAUTION BURIED ELECTRIC".
- WHEN DIRECTIONAL BORING IS REQUIRED, SUB-CONTRACTOR SHALL INSTALL A LOOSE TONING WIRE WITHIN INSTALLED CONDUIT TO ALLOW FOR IDENTIFICATION OF UNDERGROUND CONDUITS.
- ALL BOLTS SHALL BE STAINLESS STEEL.
- ALL MATERIALS AND EQUIPMENT SUPPLIED AND INSTALLED BY THE SUBCONTRACTOR SHOULD BE NEW AND UNUSED.
- PER NEC 625.22 – THE USER INTERFACE (CHARGE POST) IS CONTROLLED BY THE ELECTRICAL EQUIPMENT (SUPERCHARGER CABINET) AND THE FOLLOWING PRECAUTIONS HAVE BEEN TAKEN TO ENSURE THE SAFETY OF CUSTOMERS AND THOSE AROUND THE EQUIPMENT. BEFORE ANY VOLTAGE OR CURRENT IS APPLIED TO THE CHARGE POST, THE CABINET MUST COMMUNICATE WITH THE TESLA VEHICLE. THERE IS A "HANDSHAKE" BETWEEN THE CAR AND THE CABINET CONFIRMING THAT THE VEHICLE IS ACTUALLY A TESLA AND THAT THE VEHICLE CAN HANDLE THE SUPERCHARGING. VOLTAGE IS THEN APPLIED TO THE POWER SOCKETS IN THE CHARGE POST AND ONCE THE VOLTAGE READING FROM THE CAR IS VERIFIED AS THE SAME IN THE CHARGING CABINET, THEN CURRENT BEGINS TO FLOW. IF AT ANY POINT IN THIS PROCESS A FAULT IS DETECTED, THE CHARGING WILL STOP IMMEDIATELY, WITHIN A MATTER OF MILLISECONDS. DURING THE NORMAL CHARGING CYCLE, IF ANY FAULT OR IRREGULARITY IS DETECTED, THE CHARGING WILL AGAIN STOP WITHIN MILLISECONDS OF DETECTION. BEYOND THIS LOGIC PROTECTION, THERE IS PHYSICAL PROTECTION FROM OVER-CURRENT OR OVER-VOLTAGE WITHIN EACH OF THE CHARGERS. BEYOND THAT, FAST ACTING FUSES ALSO PROTECT THE VEHICLE OUTPUTS FROM OUTPUTTING TOO HIGH OF A CURRENT.

REINFORCED CONCRETE NOTES:

- DESIGN AND CONSTRUCTION OF ALL CONCRETE ELEMENTS SHALL CONFORM TO THE LATEST EDITIONS OF THE FOLLOWING APPLICABLE CODES: ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS"; ACI 318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE".
- DO NOT USE RETEMPERED CONCRETE, OR ADD WATER TO READY-MIX CONCRETE AT THE JOB SITE. MIX DESIGN SHALL BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO PLACING CONCRETE.
- ANY NEW CONCRETE NEEDED FOR THE CONSTRUCTION SHALL BE AIR-ENTRAINED AND SHALL HAVE 2500 PSI STRENGTH AT 28 DAYS (UNLESS OTHERWISE NOTED). ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.
- MAXIMUM AGGREGATE SIZE SHALL BE 3/4".
- THE FOLLOWING MATERIALS SHALL BE USED:

PORTLAND CEMENT:	ASTM C 150, TYPE I
REINFORCEMENT:	ASTM A 615, GRADE 60
NORMAL WEIGHT AGGREGATE:	ASTM C 33
WATER:	DRINKABLE
ADMIXTURES:	NON-CHLORIDE CONTAINING
- REINFORCING DETAILS SHALL BE IN ACCORDANCE WITH "DETAILING MANUAL-2004 PUBLICATION SP-66" AND "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", ACI-318-08.
- REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B"; ALL HOOKS SHALL BE STANDARD, UNO.
- THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:

CONCRETE CAST AGAINST EARTH:	3 IN.
CONCRETE EXPOSED TO EARTH OR WEATHER:	#6 AND LARGER 2 IN. #5 AND SMALLER & WWF 1-1/2 IN.
CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:	SLAB AND WALL 3/4 IN. BEAMS AND COLUMNS 1-1/2 IN.
- A CHAMFER 3/4" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.
- INSTALLATION OF CONCRETE ANCHOR, SHALL BE PER MANUFACTURERS WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR ENGINEERING APPROVAL WHEN DRILLING HOLES IN CONCRETE.
- CURING COMPOUNDS SHALL CONFORM TO ASTM C-309.
- ADMIXTURES SHALL CONFORM TO THE APPROPRIATE ASTM STANDARD AS REFERENCED IN ACI-301.
- DO NOT WELD OR TACKWELD REINFORCING STEEL.
- ALL DOWELS, ANCHOR BOLTS, EMBEDDED STEEL, ELECTRICAL CONDUITS, PIPE SLEEVES, GROUNDS AND ALL OTHER EMBEDDED ITEMS AND FORMED DETAILS SHALL BE IN PLACE BEFORE START OF CONCRETE PLACEMENT.
- LOCATE ADDITIONAL EXPANSION JOINTS REQUIRED TO FACILITATE CONSTRUCTION AS ACCEPTABLE TO ENGINEER. PLACE REINFORCEMENT CONTINUOUSLY THROUGH JOINT.
- REINFORCEMENT SHALL BE COLD BENT WHENEVER BENDING IS REQUIRED.
- PLACE CONCRETE IN A UNIFORM MANNER TO PREVENT THE FORMATION OF COLD JOINTS AND OTHER PLANES OF WEAKNESS. VIBRATE THE CONCRETE TO FULLY EMBED REINFORCING. DO NOT USE VIBRATORS TO TRANSPORT CONCRETE THROUGH CHUTES OR FORMWORK.
- DO NOT PLACE CONCRETE IN WATER, ICE, OR ON FROZEN GROUND.
- DO NOT ALLOW CONCRETE SUBBASE TO FREEZE DURING CONCRETE CURING AND SETTING PERIOD, OR FOR A MINIMUM OF 14 DAYS AFTER PLACEMENT.
- MAINTAIN TEMPERATURE OF CAST IN PLACE CONCRETE BETWEEN 50 DEGREES AND 90 DEGREES FAHRENHEIT. FOR COLD-WEATHER AND HOT-WEATHER CONCRETE PLACEMENT, CONFORM TO APPLICABLE ACI CODES AND RECOMMENDATIONS. IN EITHER CASE, MATERIALS CONTAINING CHLORIDE, CALCIUM, SALTS, ETC. SHALL NOT BE USED. PROTECT FRESH CONCRETE FROM WEATHER FOR 7 DAYS MINIMUM.
- UNLESS INDICATED OTHERWISE ON THE DRAWINGS, REINFORCEMENT SPLICES SHALL MEET CLASS B, TENSION LAP REQUIREMENTS IN ACCORDANCE WITH ALL PROVISIONS OF ACI 318 LATEST EDITION, UNLESS NOTED OTHERWISE.
- PROVIDE ACCESSORIES NECESSARY TO PROPERLY SUPPORT REINFORCING.

TRAFFIC MANAGEMENT NOTES:

- ALL TEMPORARY CONTROL WORK SHALL CONFORM TO THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND ALL REVISIONS, UNLESS SUPERCEDED BY THESE PLANS.
- ALL SIGN LEGENDS, BORDERS, AND MOUNTING SHALL BE IN ACCORDANCE WITH THE MUTCD.
- TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF ANY WORK.
- TEMPORARY CONSTRUCTION SIGNING, BARRICADES, AND ALL OTHER NECESSARY WORK ZONE TRAFFIC CONTROL DEVICES SHALL BE REMOVED FROM THE HIGHWAY OR COVERED WHEN THEY ARE NOT REQUIRED FOR CONTROL OF TRAFFIC.
- SIGNS AND SIGN SUPPORTS LOCATED ON OR NEAR THE TRAVELED WAY, CHANNELIZING DEVICES, BARRIERS, AND CRASH ATTENUATORS MUST PASS THE CRITERIA SET FORTH IN NCHRP REPORT 350, "RECOMMENDED PROCEDURES FOR THE SAFETY PERFORMANCE EVALUATION OF HIGHWAY FEATURES" AND/OR "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH).
- CONTRACTORS SHALL NOTIFY THE OWNER AND ALL TENANTS OF THIS PROPERTY AT LEAST 24 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE THE TEMPORARY CLOSURE OF ACCESS, SUCH AS CONDUIT INSTALLATION, EXISTING PAVEMENT EXCAVATION, TEMPORARY DRIVEWAY PAVEMENT PLACEMENT, AND SIMILAR OPERATIONS.
- THE FIRST FIVE PLASTIC DRUMS OF A TAPER SHALL BE MOUNTED WITH TYPE A LIGHTS.
- MAXIMUM SPACING OF TRAFFIC DEVICES IN A TAPER (DRUMS OR CONES) IS EQUAL IN FEET TO THE SPEED LIMIT IN MPH.
- MINIMUM LANE WIDTH IS TO BE 11 FEET (3.3m) UNLESS OTHERWISE SHOWN. MINIMUM LANE WIDTH TO BE MEASURED FROM THE EDGE OF DRUMS OR MEDIAN BARRIER.
- EXISTING PEDESTRIAN ACCESS SHALL BE MAINTAINED AT ALL TIMES THROUGH A COMBINATION OF PEDESTRIAN DETOURS OR PROTECTED SAFE ROUTES. ALL PEDESTRIAN ROUTES SHALL MEET APPLICABLE ACCESSIBILITY REQUIREMENTS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND PROTECTION OF TRAFFIC THROUGHOUT CONSTRUCTION AT THIS LOCATION. THE CONTRACTOR SHALL INSTALL TEMPORARY TRAFFIC SIGNS, DRUMS, CONES, OR OTHER TRAFFIC CONTROL DEVICES TO DIRECT VEHICLES AND PEDESTRIANS AROUND THE WORK ZONE.

HORIZONTAL DIRECT DRILLING NOTES:

- THE WORK SPECIFIED IN THIS SECTION CONSISTS OF FURNISHING AND INSTALLING UNDERGROUND UTILITIES USING THE DIRECTIONAL BORING (HORIZONTAL DIRECTIONAL DRILLING, HDD) METHOD OF INSTALLATION, ALSO COMMONLY REFERRED TO AS GUIDED HORIZONTAL BORING. THIS WORK SHALL INCLUDE ALL SERVICES, EQUIPMENT, MATERIALS, AND LABOR FOR THE COMPLETE AND PROPER INSTALLATION, TESTING, RESTORATION OF UNDERGROUND UTILITIES AND ENVIRONMENTAL PROTECTION AND RESTORATION.
- WORK PLAN: PRIOR TO BEGINNING WORK, THE CONTRACTOR MUST SUBMIT TO THE ENGINEER A GENERAL WORK PLAN OUTLINING THE PROCEDURE AND SCHEDULE TO BE USED TO EXECUTE THE PROJECT. PLAN SHOULD DOCUMENT THE THOUGHTFUL PLANNING REQUIRED TO SUCCESSFULLY COMPLETE THE PROJECT.
- ENVIRONMENTAL PROTECTION: CONTRACTOR SHALL PLACE SILT FENCE BETWEEN ALL BORING OPERATIONS AND ANY DRAINAGE, WETLAND, WATERWAY OR OTHER AREA DESIGNATED FOR SUCH PROTECTION BY CONTRACT DOCUMENTS, STATE, FEDERAL AND LOCAL REGULATIONS. ADDITIONAL ENVIRONMENTAL PROTECTION NECESSARY TO CONTAIN ANY HYDRAULIC OR BORING FLUID SPILLS SHALL BE PUT IN PLACE, INCLUDING BERMS, LINERS, TURBIDITY CURTAINS AND OTHER MEASURES. CONTRACTOR SHALL ADHERE TO ALL APPLICABLE ENVIRONMENTAL REGULATIONS. FUEL OR OIL MAY NOT BE STORED IN BULK CONTAINERS WITHIN 200' OF ANY WATER-BODY OR WET-LAND.
- UTILITY LOCATES: CONTRACTOR SHALL NOTIFY ALL COMPANIES WITH UNDERGROUND UTILITIES IN THE WORK AREA VIA THE STATE OR LOCAL "ONE-CALL" TO OBTAIN UTILITY LOCATES. ONCE THE UTILITIES HAVE BEEN LOCATED CONTRACTOR SHALL PHYSICALLY IDENTIFY THE EXACT LOCATION OF THE UTILITIES BY VACUUM OR HAND EXCAVATION, WHEN POSSIBLE, IN ORDER TO DETERMINE THE ACTUAL LOCATION AND PATH OF ANY UNDERGROUND UTILITIES WHICH MIGHT BE WITHIN 20 FEET OF THE BORE PATH. CONTRACTOR SHALL NOT COMMENCE BORING OPERATIONS UNTIL THE LOCATION OF ALL UNDERGROUND UTILITIES WITHIN THE WORK AREA HAVE BEEN VERIFIED.
- SAFETY: CONTRACTOR SHALL ADHERE TO ALL APPLICABLE STATE, FEDERAL AND LOCAL SAFETY REGULATIONS AND ALL OPERATIONS SHALL BE CONDUCTED IN A SAFE MANNER. SAFETY MEETINGS SHALL BE CONDUCTED AT LEAST WEEKLY WITH A WRITTEN RECORD OF ATTENDANCE AND TOPIC SUBMITTED TO ENGINEER.
- SITE RESTORATION: FOLLOWING BORING OPERATIONS, CONTRACTOR WILL DE-MOBILIZE EQUIPMENT AND RESTORE THE WORK-SITE TO ORIGINAL CONDITION. ALL EXCAVATIONS WILL BE BACKFILLED AND COMPACTED TO 95% OF ORIGINAL DENSITY. LANDSCAPING WILL BE RESTORED TO ORIGINAL.
- RECORD KEEPING: CONTRACTOR SHALL MAINTAIN A DAILY PROJECT LOG OF BORING OPERATIONS AND A GUIDANCE SYSTEM LOG WITH A COPY GIVEN TO ENGINEER AT COMPLETION OF PROJECT. AS-BUILT DRAWINGS SHALL BE CERTIFIED AS TO ACCURACY BY CONTRACTOR.



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PALO ALTO, CA 94304
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SUITE 100
ATLANTA, GA 30341-4015
PHONE: 678.530.002
GA LIC. NO. PEF002398 (6/30/2024)



DRAWN BY: WG

CHECKED BY: DSW

APPROVED BY: MCS

PROJECT #: 50123704

JOB #: 50163344

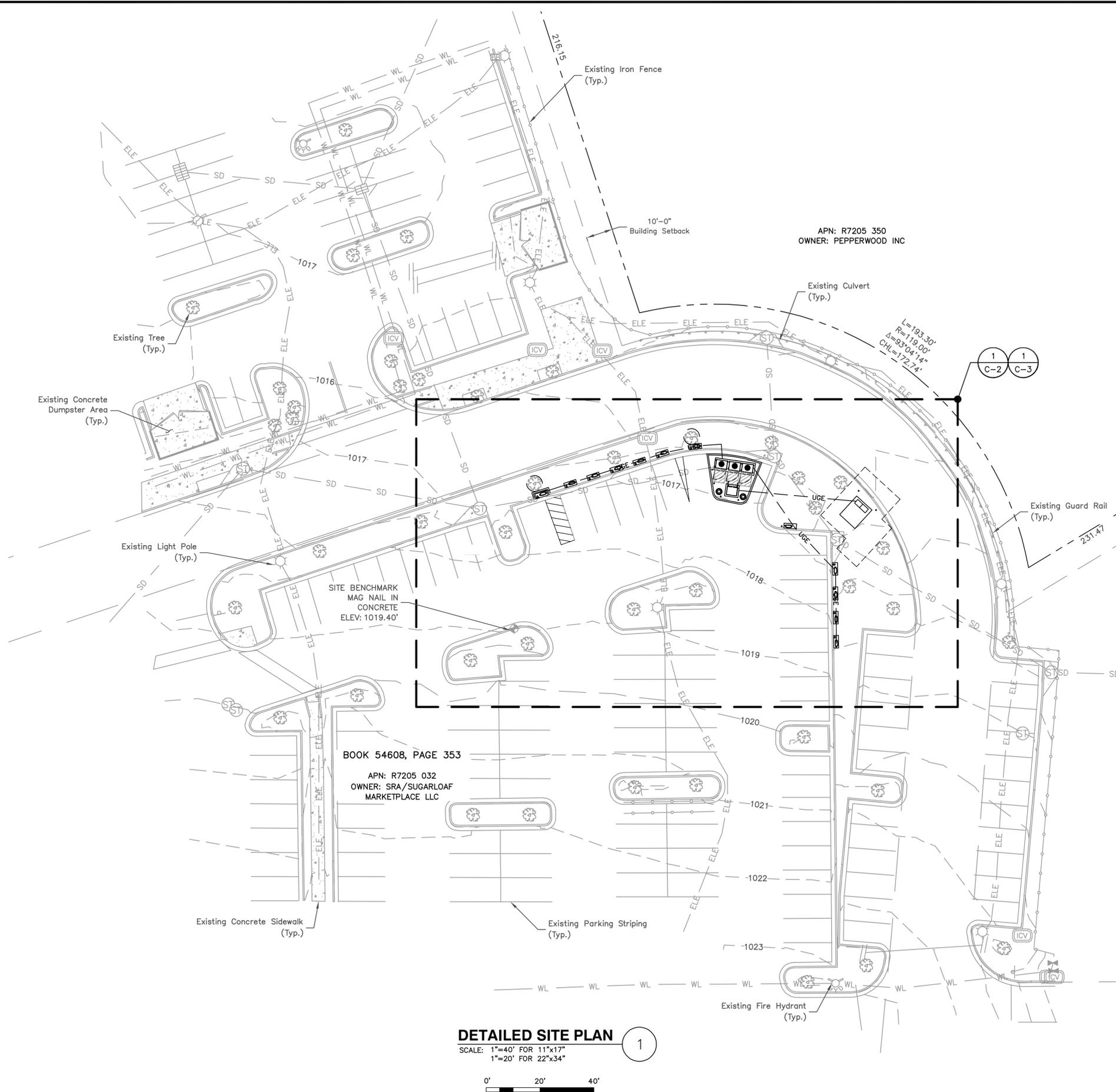
SUBMITTALS		
REV.	DATE	DESCRIPTION
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(TRT ID: 27314)

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DULUTH, GA 30097

SHEET TITLE
GENERAL NOTES II

SHEET NUMBER
GN-2



DETAILED SITE PLAN

SCALE: 1"=40' FOR 11"x17"
1"=20' FOR 22"x34"



1

LEGEND

- DECIDUOUS TREE WITH DRIPLINE
- ELECTRIC BOX
- FENCE GATE
- FIRE HYDRANT
- IRRIGATION CONTROL VALVE
- LIGHT POLE
- SIGN
- SITE BENCHMARK
- STORM INLET (RECTANGLE)
- STORM MANHOLE
- UNKNOWN TERMINUS
- WATER VALVE
- ELECTRIC LINE (UNDERGROUND)
- GUARD RAIL
- HAND RAIL
- IRON FENCE
- STORM LINE (UNDERGROUND)
- UNKNOWN LINE (UNDERGROUND)
- WATER LINE (UNDERGROUND)
- CONCRETE AREA

TESLA PROVIDED EQUIPMENT LIST

EQUIPMENT	QTY
GRAY SIGN POST OFFSET EV FLEX REBOUNDBING BOLLARD	10
GRAY 4" STANDARD DEEP MOUNT CRASHCORE	5
V3 CABINET (4 POST)	3
CHARGE POST PRECAST	12
1600A LINCOLN SWITCHGEAR	1
DISABLED ACCESS, USE LAST SIGN	1
VAN ACCESSIBLE SIGN	1
ADA HANDLE	1
STAR CENTER KIT	1
TRASH BLACK	1
RECYCLE BLUE	1

NOTES:

- SITE PLAN BASED ON ENGINEERING DESIGN SURVEY: A PORTION OF LAND LOT 205 OF THE 7TH DISTRICT, RECORDED SEPTEMBER 21, 2016, BOOK 54608, PAGE 353, CITY OF DULUTH, GWINNETT COUNTY, GA BY CLARK LAND SURVEYING, INC. DATED 04/26/2023.
- UTILITY CONNECTION TO BE MADE UNDER GEORGIA POWER UTILITIES STANDARDS, CONFIRM FINAL DESIGN PRIOR TO CONSTRUCTION, GEORGIA POWER WORK ORDER TBD.
- EXISTING UNDERGROUND UTILITIES LOCATED WITHIN AREA OF PROPOSED TRENCH & EQUIPMENT SITE AREA. HAND DIG AND RELOCATE AS REQUIRED.
- EXISTING STORM DRAIN INLETS TO BE COVERED WITH SILT BAG DURING CONSTRUCTION.
- CONTRACTOR TO CONFIRM ADA/ACCESSIBLE STRIPING & ASSOCIATED STALLS HAVE <2% GRADE IN ALL DIRECTIONS.
- RAISED ISLAND TO BE FINISHED WITH ROCK OR GRAVEL GROUND COVER. NO MULCH PERMITTED



3500 DEER CREEK ROAD
PALO ALTO, CA 94304
(650) 681-5000



Dewberry Engineers Inc.
2835 BRANDYWINE ROAD
SUITE 100
ATLANTA, GA 30341-4015
PHONE: 678.530.002
GA LIC. NO. PEF002398 (6/30/2024)



DRAWN BY: WG

CHECKED BY: DSW

APPROVED BY: MCS

PROJECT #: 50123704

JOB #: 50163344

SUBMITTALS

REV.	DATE	DESCRIPTION
0	05/26/23	ISSUED FOR S&S
B	05/17/23	ISSUED FOR 90% REVIEW
A	05/09/23	ISSUED FOR 90% REVIEW

SITE NAME:
DULUTH, GA - PEACHTREE INDUSTRIAL BLVD (TRT ID: 27314)

SITE ADDRESS:
2220 PEACHTREE INDUSTRIAL BLVD
DULUTH, GA 30097

SHEET TITLE
DETAILED SITE PLAN

SHEET NUMBER
C-1



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DRAWN BY:	WG
CHECKED BY:	DSW
APPROVED BY:	MCS
PROJECT #:	50123704
JOB #:	50163344

SUBMITTALS

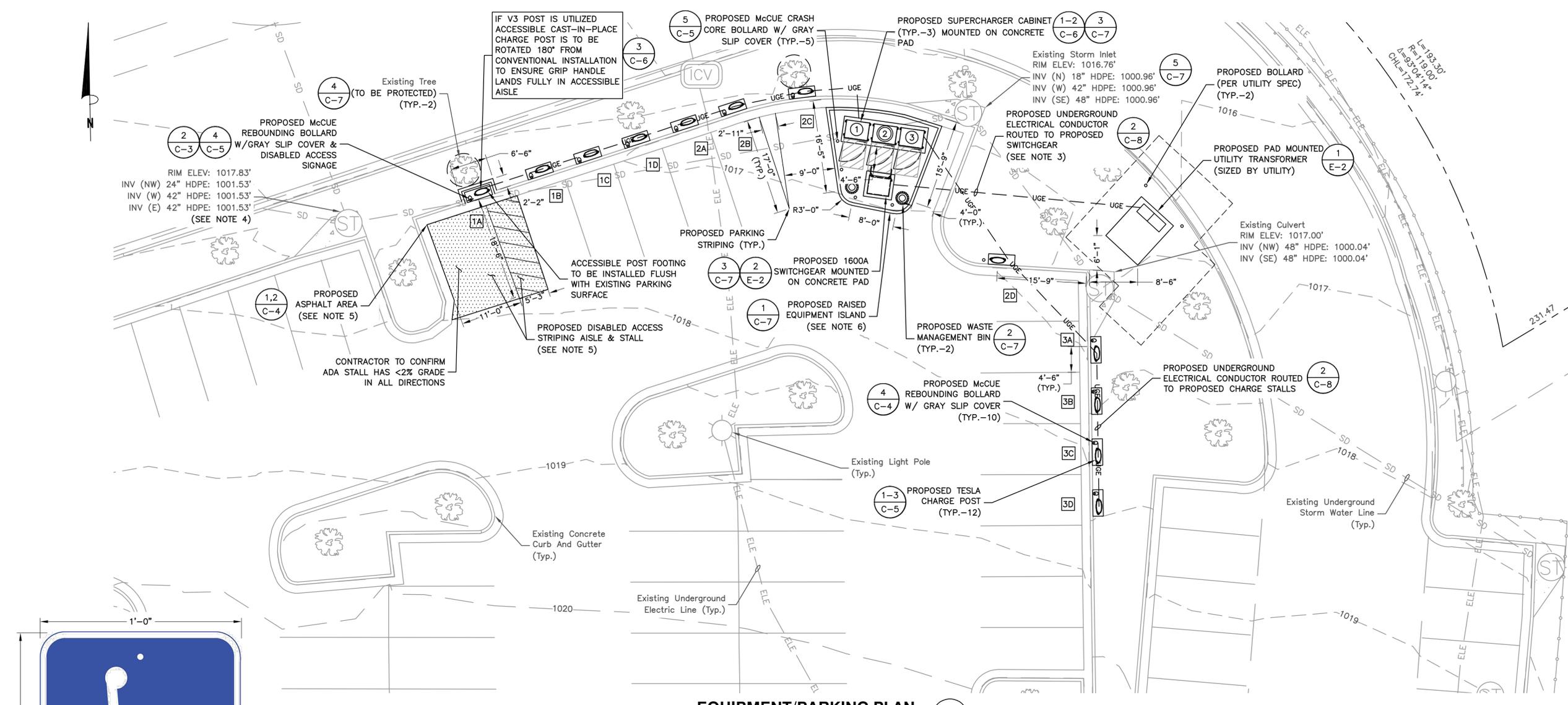
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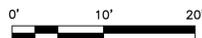
SHEET TITLE
EQUIPMENT/PARKING PLAN

SHEET NUMBER
C-3



EQUIPMENT/PARKING PLAN

SCALE: 1"=20' FOR 11"x17"
1"=10' FOR 22"x34"



ADA VAN



DISABLED ACCESS SIGN
SCALE: N.T.S.

LEGEND

Ⓜ	TESLA 'STAR-POINT' SUPERCHARGER #
Ⓢ	TESLA 'STAR-CENTER' SUPERCHARGER #
1A	TESLA CHARGE POST

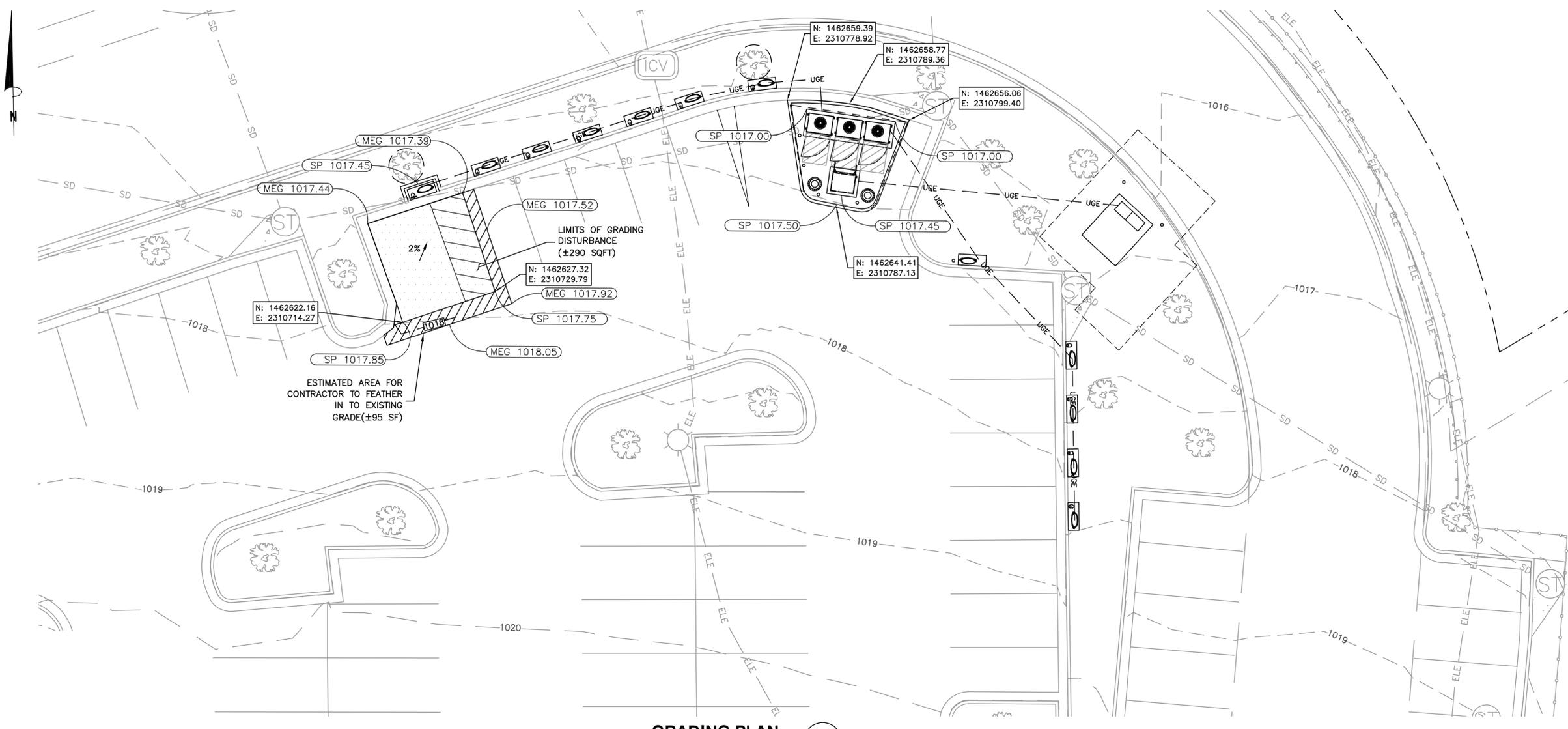
PARKING STALL SCHEDULE

DESCRIPTION	QUANTITY
EXISTING STALLS (TO BE MODIFIED)	15
PROPOSED TESLA STALLS	12
NET PARKING STALL CHANGE	-3

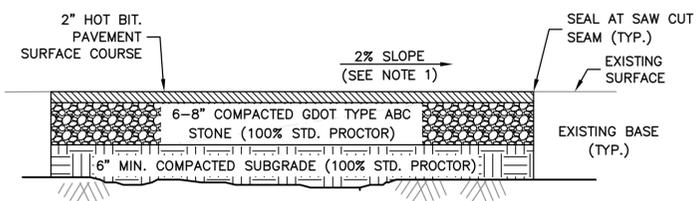
NOTES:

- SITE PLAN BASED ON ENGINEERING DESIGN SURVEY: A PORTION OF LAND LOT 205 OF THE 7TH DISTRICT, RECORDED SEPTEMBER 21, 2016, BOOK 54608, PAGE 353, CITY OF DULUTH, GWINNETT COUNTY, GA BY CLARK LAND SURVEYING, INC. DATED 04/26/2023.
- UTILITY CONNECTION TO BE MADE UNDER GEORGIA POWER UTILITIES STANDARDS, CONFIRM FINAL DESIGN PRIOR TO CONSTRUCTION, GEORGIA POWER WORK ORDER TBD.
- EXISTING UNDERGROUND UTILITIES LOCATED WITHIN AREA OF PROPOSED TRENCH & EQUIPMENT SITE AREA. HAND DIG AND RELOCATE AS REQUIRED.
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2



GRADING PLAN
 SCALE: 1"=20' FOR 11"x17"
 1"=10' FOR 22"x34"



NOTE:
 1. MAINTAIN EXISTING DRAINAGE PATTERNS. SLOPE TOWARD EXISTING STORM DRAIN.

ASPHALT PAVEMENT DETAIL
 SCALE: N.T.S.

- NOTES:**
- SITE PLAN BASED ON ENGINEERING DESIGN SURVEY: A PORTION OF LAND LOT 205 OF THE 7TH DISTRICT, RECORDED SEPTEMBER 21, 2016, BOOK 54608, PAGE 353, CITY OF DULUTH, GWINNETT COUNTY, GA BY CLARK LAND SURVEYING, INC. DATED 04/26/2023.
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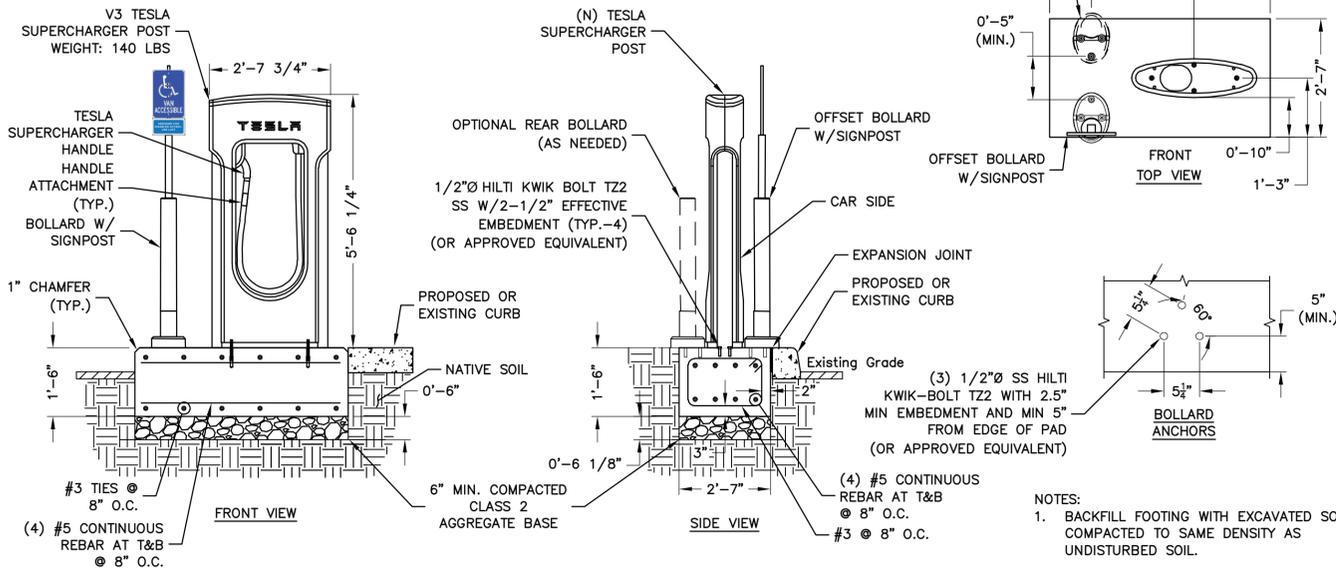
SITE ADDRESS:
 2220 PEACHTREE INDUSTRIAL BLVD
 DULUTH, GA 30097

SHEET TITLE
GRADING PLAN

SHEET NUMBER
C-4

SUPERCHARGER PEDESTAL INSTALLATION NOTE:

WHEN INSTALLED BEHIND CURB, THE TOP OF THE PEDESTAL SHOULD BE FLUSH WITH THE CURB. WHEN INSTALLED IN A PAVEMENT AREA OR BEHIND THE EDGE OF PAVEMENT, THE TOP OF THE PEDESTAL SHOULD BE FLUSH WITH THE PAVEMENT.



V3 SUPERCHARGER POST CAST-IN-PLACE FOUNDATION DETAIL

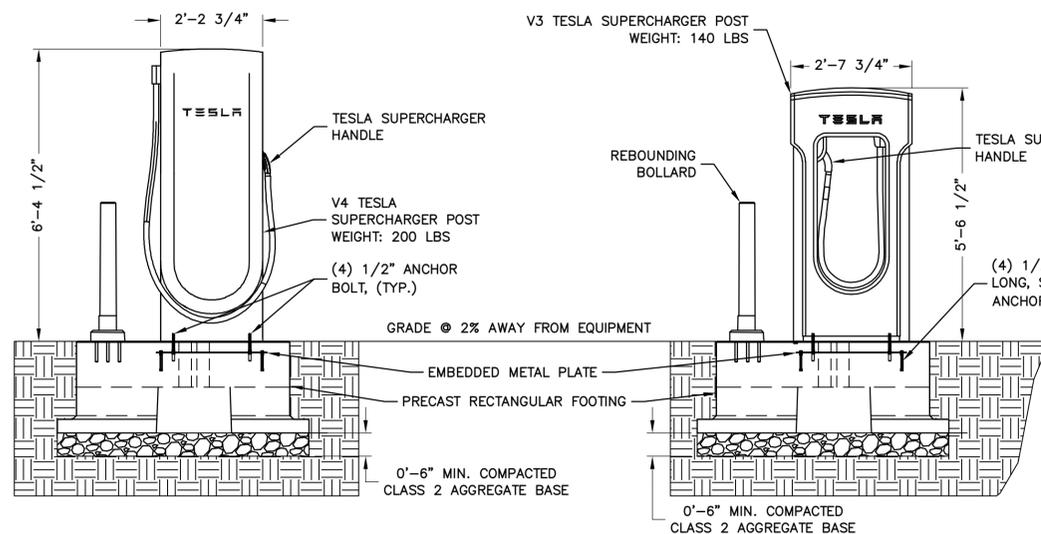
SCALE: N.T.S.

PRE-CAST PEDESTAL INSTALLATION NOTE:

PRE-CAST TESLA SUPERCHARGER PEDESTAL MAY ONLY BE USED IN STALL 1A IF V4 POST IS UTILIZED AS V3 POST AND BOLLARD ORIENTATION FOR REMAINING STALLS REQUIRES CAST-IN-PLACE FOOTING FOR PROPER ACCESSIBLE INSTALLATION.

SUPERCHARGER PEDESTAL INSTALLATION NOTE:

WHEN INSTALLED BEHIND CURB, THE TOP OF THE PEDESTAL SHOULD BE FLUSH WITH THE CURB. WHEN INSTALLED IN A PAVEMENT AREA OR BEHIND THE EDGE OF PAVEMENT, THE TOP OF THE PEDESTAL SHOULD BE FLUSH WITH THE PAVEMENT.



TESLA SUPERCHARGER POST PRECAST FOUNDATION DETAIL

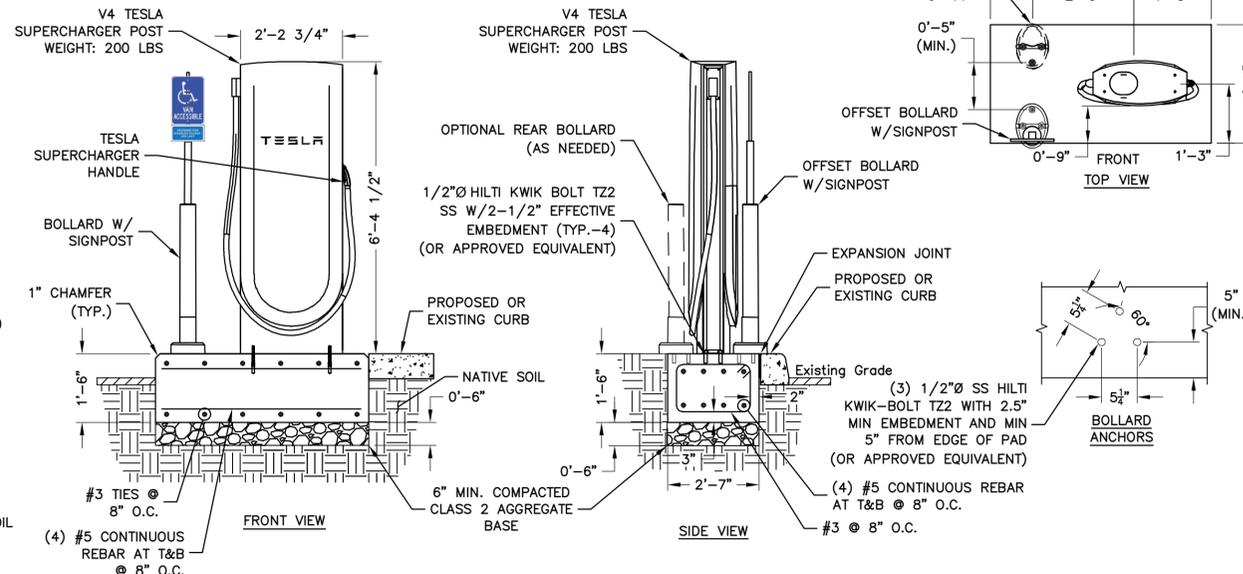
SCALE: N.T.S.

NOTES:

1. PRECAST FOOTING REINFORCED WITH STRUCTURAL FIBER VOLUME: 0.483 CU YDS WEIGHT: 1,990 LBS SEE CUTSHEETS FOR ADDITIONAL INFORMATION
2. SS01.1333 SUPERCHARGER POST CENTER ON CENTER PRECAST FOOTING DETAIL RA WIND RATING (WITHOUT SIGN) = 134 MPH WIND RATING (WITH SIGN) = 120 MPH

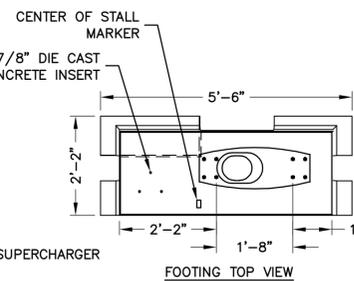
SUPERCHARGER PEDESTAL INSTALLATION NOTE:

WHEN INSTALLED BEHIND CURB, THE TOP OF THE PEDESTAL SHOULD BE FLUSH WITH THE CURB. WHEN INSTALLED IN A PAVEMENT AREA OR BEHIND THE EDGE OF PAVEMENT, THE TOP OF THE PEDESTAL SHOULD BE FLUSH WITH THE PAVEMENT.

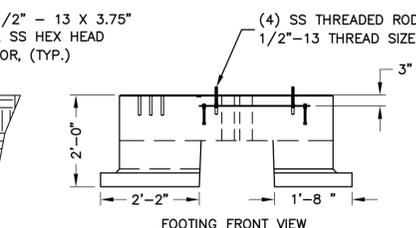


V4 SUPERCHARGER POST CAST-IN-PLACE FOUNDATION DETAIL

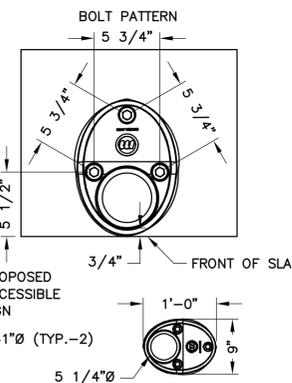
SCALE: N.T.S.



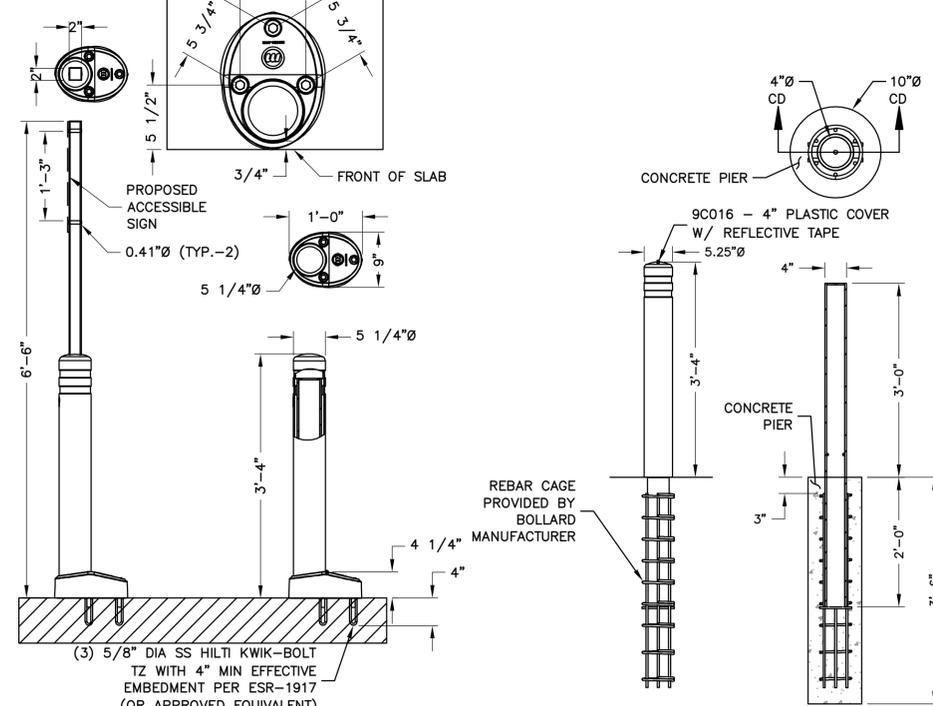
FOOTING TOP VIEW



FOOTING FRONT VIEW



BOLT PATTERN



McCUE REBOUNING BOLLARD & SIGN

SCALE: N.T.S.

McCUE CRASH CORE BOLLARD DETAIL

SCALE: N.T.S.

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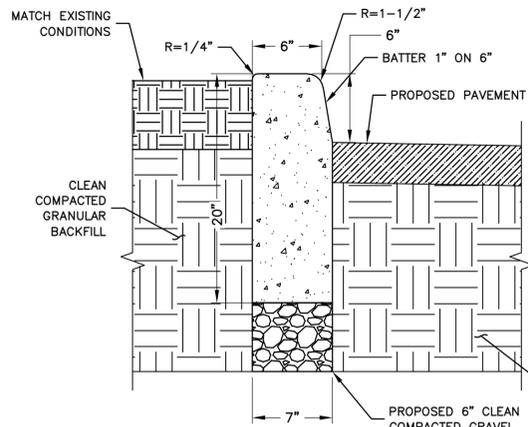
SUBMITTALS		
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DULUTH, GA 30097

SHEET TITLE
CONSTRUCTION DETAILS I

SHEET NUMBER
C-5



NOTES:

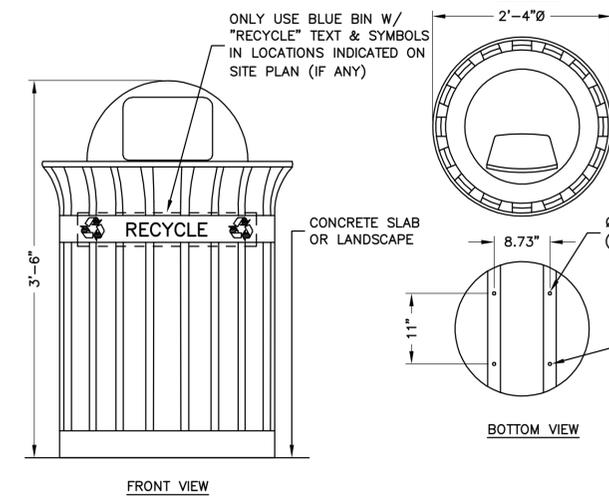
1. SAW CUT AREA TO BE REPAIRED/REPLACED. DISPOSE OF DEBRIS PROPERLY OFF SITE.
2. INSTALL FORMS AS NECESSARY.
3. COMPACT EXISTING SUBGRADE MATERIAL TO ACHIEVE 95% COMPACTION.
4. CONCRETE TO BE 4000 PSI AIR ENTRAINED CONCRETE.
5. INSTALL CONTROL JOINTS EVERY 10 LINEAR FEET.

CONCRETE CURB DETAIL

SCALE: N.T.S.

1

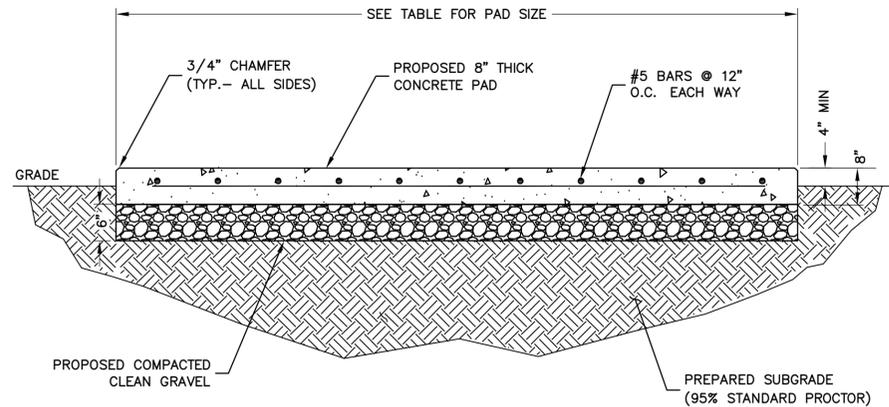
NOTE: TRASH & RECYCLING BINS TO BE PROVIDED BY TESLA



WASTE MANAGEMENT BIN DETAIL

SCALE: N.T.S.

2



CONCRETE PAD DIMENSIONS				
PAD TYPE	L	W	t (THICKNESS)	AREA
CABINETS	10'-0"	8'-0"	8"	80.00 S.F.
SWITCHGEAR	5'-0"	4'-6"	8"	22.50 S.F.

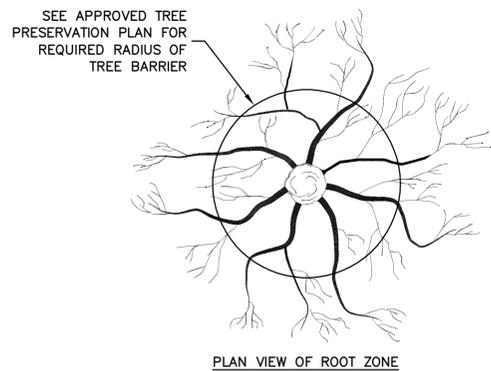
NOTE:

1. SEE CONCRETE NOTES ON SHEET GN-2.

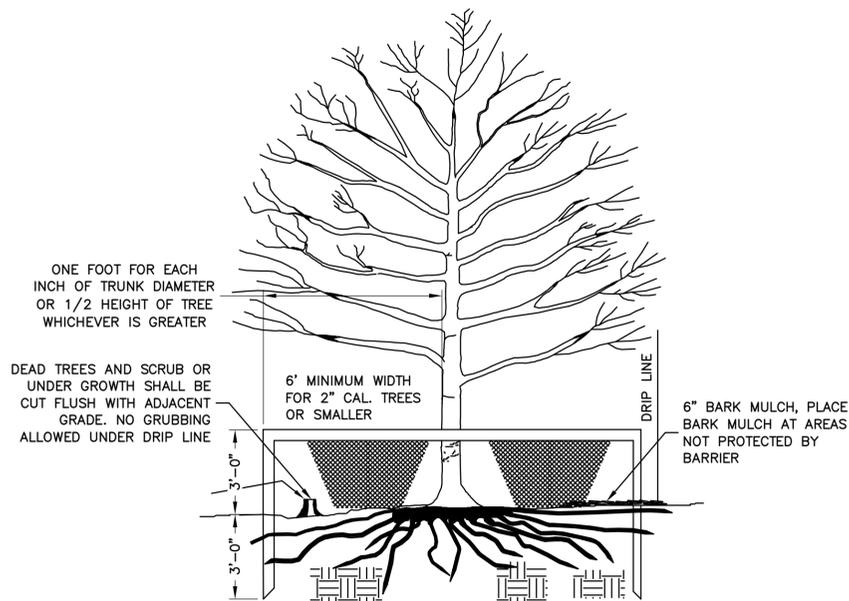
CONCRETE PAD DETAIL

SCALE: N.T.S.

3



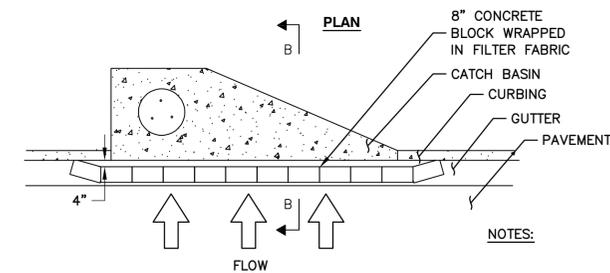
PLAN VIEW OF ROOT ZONE



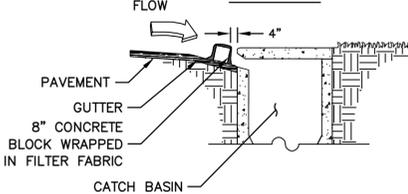
TREE PROTECTION DETAIL

SCALE: N.T.S.

4



SECTION B-B



NOTES:

1. INSTALL FILTER AFTER ANY ASPHALT PAVEMENT INSTALLATION.
2. WRAP 8" CONCRETE BLOCKS IN FILTER FABRIC AND SPAN ACROSS CATCH BASIN INLET.
3. FACE OPENINGS IN BLOCKS OUTWARD.
4. LEAVE A GAP OF APPROXIMATELY 4" BETWEEN THE CURB AND THE FILTERS TO ALLOW FOR OVERFLOW TO PREVENT HAZARDOUS PONDING.
5. INSTALL OUTLET PROTECTION BELOW STORM DRAIN OUTLETS.

CURB INLET "PIGS IN BLANKET" PROTECTION DETAIL

SCALE: N.T.S.

5



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GA LIC. NO. PEF002398 (6/30/2024)



DRAWN BY:	WG
CHECKED BY:	DSW
APPROVED BY:	MCS
PROJECT #:	50123704
JOB #:	50163344

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DULUTH, GA 30097

SHEET TITLE
CONSTRUCTION DETAILS III

SHEET NUMBER
C-7

11/19/2021

Mr. Mark Edwards
Tesla, Inc.
3500 Deer Creek Rd
Palo Alto, CA 94304, USA

Subject: Duraline Conduits 2", 3" and 4" Testing

Dear Mr. Mark Edwards:

This letter report is to present the results of testing results of Duraline flexible conduit for Tesla supercharger station installation in accordance with the following standards:

- ANSI/CAN/UL1660 Liquid-tight Flexible Nonmetallic Conduit, 6th Ed. dated 01/30/2019
- UL 651A Schedule 40 and 80 High Density Polyethylene (HDPE) Conduit, 5th Ed. dated 03/10/2017
- UL 1990 Nonmetallic Underground Conduit with Conductors, 3rd Ed. dated 01/20/2017

The project was authorized by the signed PO #90029467, dated 08/07/2021 for the project proposal # 234041515, the following tests have been completed by 11/02/2021 in the Duraline labs on Knoxville TN.

The following table lists completed tests in accordance with the standards UL 1990, UL 651A and UL 1660.

No.	UL 1990 Clause	UL 651A Clause	UL 1660 Clause	Test description	Test Result
1	10	11.3	--	Water absorption test	Pass
2	11	9.3	--	Low temperature handling test	Pass
3	--	--	5.6	Tension	Pass
4	--	--	5.5	Deflection test	Pass
5	--	--	5.4	Cold Impact	Pass
6	15	11.2	5.11	Moisture penetration	Pass
8	17	--	5.16	Direct burial crush test	Note

Note
As discussed with Duraline engineers, conduit stiffness varies with wall thickness per Table 5 in the standard ASTM F2160 - 16 Solid Wall High Density Polyethylene (HDPE) Conduit based on Controlled Outside Diameter (OD). The stiffness calculated for conduit 2", 3" and 4" are 101 +/- 22 psi, 92 +/- 2 psi

M0009914 Attachment 1

Page 1 of 2

Rev. 0

and 61 +/- 2 psi. The test has been performed per ASTM 2412 as required by both UL 1990 and UL 1660. All samples were visually inspected and no any cracks observed on samples after the test. Those stiffness test data are reference for Tesla engineers to determine conduit burial depth for Tesla supercharger station installation.

The Duraline conduit test report is enclosed.

The above Duraline conduits can be used in the field installation of charge post CS-350 A2 per NEC with adequate depth calculation.

If there are any questions regarding the results contained in this report, or any of the other services offered by TÜVRheinland of North America, Inc., please do not hesitate to contact the undersigned.

Please note, this letter report does not represent authorization for the use of any TÜVRheinland certification marks.

Evaluated by:

Zhiyong Hu
Zhiyong Hu
Principal Test Engineer
Email: zhu@us.tuv.com

Reviewed by:

Howard Liu
Howard Liu
Manager, Power Electronics Segment - Americas
Email: hliu@us.tuv.com

M0009914 Attachment 1

Page 2 of 2

Rev. 0

SPECIALTY SMOOTH-COR FLEX

- Flexible: Reduces/eliminates the need for sweeps and bends
- Crush resistant: Equivalent to Schedule 40 PVC
- Lightweight: Easier installation, 40% lighter than PVC
- Compatibility: Easily adapts to other conduit materials
- Glueless coupling: Safe, quick assembly
- Gasketed: Air and watertight
- Low COF: Longer cable pulls with lower cable stress

INSTALLATION TYPES	SIZE RANGE AVAILABLE	STANDARD COLORS
Underground Direct Bury Concrete Encasement	2.0" 3.0" 4.0"	Outer Wall: ■ Inner Wall: ■

STANDARD
DETAILS Manufactured from flexible HDPE (High Density Polyethylene)
SPECIFICATIONS All Smooth-Cor Flex dimensions meet or exceed one or more of the following: ASTM D-3350, ASTM D-438, ASTM D-792, ASTM D-1228, ASTM D-1493
CONDUIT MARKINGS Permanent marking along conduit includes: material, relevant standards, production info, and sequential feet or meter markings.
CO-EXTRUDED LINING Corrugated exterior with a smooth, co-extruded inner layer
PRE-INSTALLED TAPE Factory pre-installed Bull-Line™ 1250lb Pull Tape comes standard in Smooth-Cor Flex on steel reels. Smooth-Cor Flex coils are only available as empty.
OPTIONS
PACKAGING Available on steel reels or 250' coils



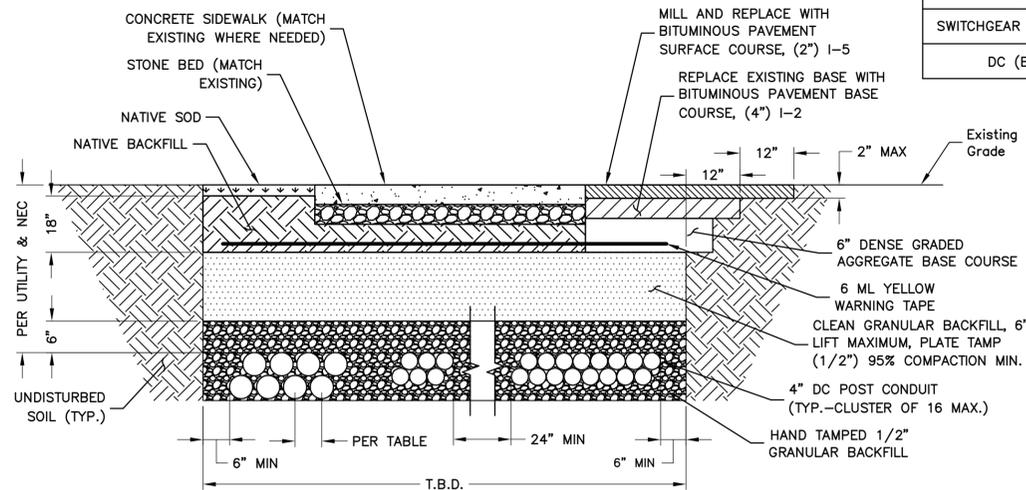
NOTES:

- DURALINE SMOOTH-COR FLEX CONDUIT HAS BEEN CERTIFIED AS A CRITICAL COMPONENT OF THE SUPERCHARGER POST BY TÜV.
- PRODUCT WILL BE USED TO CONNECT THE SUPERCHARGER CABINET TO SUPERCHARGER POST.
- PRODUCT SHALL ONLY BE USED FOR HORIZONTAL RUNS WITHIN DC DISTRIBUTION TRENCH. FOR ALL VERTICAL TRANSITIONS INTO/OUT OF EQUIPMENT CONTRACTOR SHALL UTILIZES SCH.40 PVC CONDUIT AND TRANSITION TO DURALINE BELOW GRADE.

DURALINE CONDUIT TÜV CERTIFICATION

SCALE: N.T.S.

1



TYP. BURIED CONDUIT TRENCH DETAILS

SCALE: N.T.S.

2

MINIMUM CENTER TO CENTER CONDUIT SPACING

SWITCHGEAR TO CABINETS	7.5" O.C.
DC (BUSS)	7.5" O.C.

NOTES:

- IF FREE OF ORGANIC OR OTHER DELETERIOUS MATERIAL, EXCAVATED MATERIAL MAY BE USED FOR BACKFILL.
- IF NOT, PROVIDE CLEAN, COMPACTIBLE MATERIAL. COMPACT IN 8" LIFTS. REMOVE ANY LARGE ROCKS PRIOR TO BACKFILLING. CONTRACTOR TO VERIFY LOCATION OF EXISTING U/G UTILITIES PRIOR TO DIGGING.
- CONCRETE ENCASE CONDUIT WHEN TRENCHING UNDER SITE ACCESS ROAD.
- ANY PAVEMENT DAMAGE DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR TO PRE CONSTRUCTION CONDITIONS OR BETTER.
- MAINTAIN 12" SEPARATION MIN. BETWEEN AC OR DC CONDUCTORS AND COMMUNICATION CABLES.
- MAINTAIN 2" SEPARATION MINIMUM BETWEEN OUTER WALLS OF CONDUITS.
- CONFIRM ALL DEPTHS W/UTILITY & NEC PRIOR TO CONSTRUCTION.



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DRAWN BY: WG

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APPROVED BY: MCS

PROJECT #: 50123704

JOB #: 50163344

SUBMITTALS

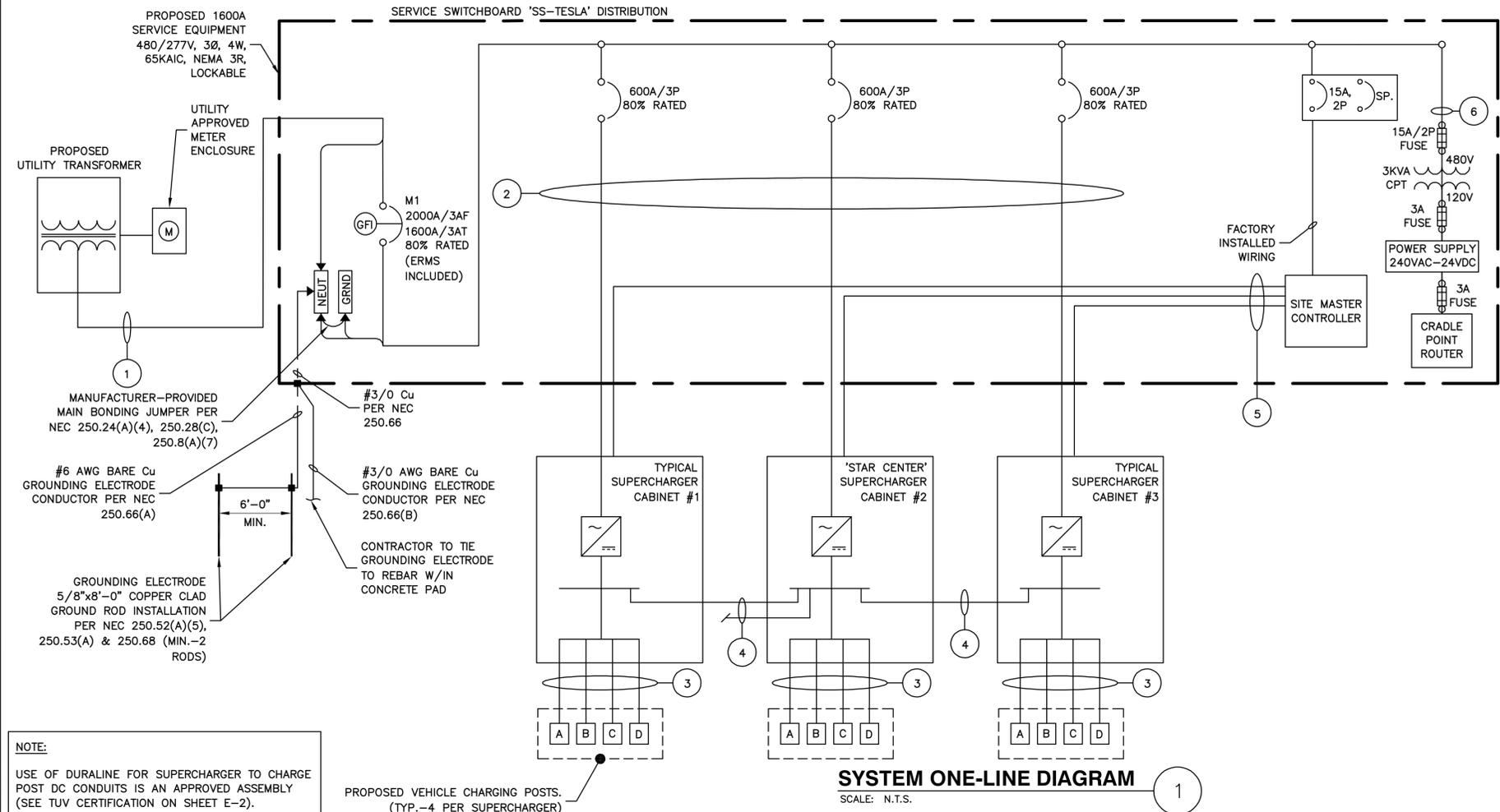
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SHEET TITLE
CONSTRUCTION DETAILS IV

SHEET NUMBER
C-8



SERVICE ELECTRICAL CIRCUIT SCHEDULE			
NO:	FROM	TO	CONFIGURATION
1	UTILITY TRANSFORMER	PROPOSED SERVICE EQUIPMENT: INCOMING	[5 SETS] (3) 600MCM AL (THWN-2) & (1) 600MCM AL (THWN-2) NEUT IN 4" PVC CONDUIT
2	PROPOSED SERVICE EQUIPMENT: PANEL (600A, 80% RATED)	PROPOSED TESLA SUPERCHARGER	[2 SETS:] (3) 500MCM AL (THWN-2) (1) 500MCM AL (THWN-2) NEUT (1) #1 CU OR 2/0 AL EGC* IN 4" PVC/HDPE CONDUIT**
3A	PROPOSED TESLA SUPERCHARGER	PROPOSED TESLA POST (TYP.-12) V3 CHARGE POST***	[1 SET PER CHARGING POST] (4) 350MCM AL (XHHW-2) (1000V), (1) #1 AWG CU OR #2/0 AWG AL EGC*, & (1) 1000V SHIELDED COMM CABLE (PER TESLA) IN 4" PVC/HDPE CONDUIT**
3B	PROPOSED TESLA SUPERCHARGER	PROPOSED TESLA POST (TYP.-12) ALT. CHARGE POST***	[1 SET PER CHARGING POST] (4) 600MCM AL (XHHW-2) (1000V), (1) #2/0 AWG CU EGC (2) #6 AWG CU (1000V), & (1) 1000V SHIELDED COMM CABLE (PER TESLA) IN 4" PVC/HDPE CONDUIT**
4	DC BUS BETWEEN PROPOSED SUPERCHARGERS	DC BUS BETWEEN PROPOSED SUPERCHARGERS	[2 SETS] (2) 600MCM AL (XHHW-2) (1) 1/0 CU GROUND & (1) 3/0 AWG AL DC MID 1000V RATED IN 3" PVC
5	SITE CONTROLLER	SUPERCHARGER (TYP.)	SHIELDED CAT6E IN 1" CONDUIT**
6	PROPOSED SERVICE EQUIPMENT: PANEL 15(A)	PROPOSED CRADLEPOINT ROUTER	INTERNALLY WIRED CONTROL CIRCUIT (BY MANUFACTURER)

* MODIFIED PER NEC 250.64(A)(2)
** PER UL 615A AND NEC 253, LISTED HDPE CONDUIT PERMITTED. CONTRACTOR TO CONFIRM USE W/ TESLA CM
*** CONTRACTOR TO INSTALL APPLICABLE WIRING CONFIGURATION DEPENDING ON CHARGE POST TYPE INSTALLED ON SITE

AC SUPERCHARGER LENGTHS		
SUPERCHARGER	LINEAR LENGTH BREAKER PANEL TO SUPERCHARGER	ESTIMATED LENGTH*
1	10'	35'
LENGTH OF AC AL WIRE PER CONDUIT**:		140'
TOTAL NUMBER OF CONDUITS:		2
LENGTH OF AC AL WIRE***:		280'
2	7'	32'
LENGTH OF AC AL WIRE PER CONDUIT**:		128'
TOTAL NUMBER OF CONDUITS:		2
LENGTH OF AC AL WIRE***:		256'
3	10'	35'
LENGTH OF AC AL WIRE PER CONDUIT**:		140'
TOTAL NUMBER OF CONDUITS:		2
LENGTH OF AC AL WIRE***:		280'
TOTAL LENGTH OF AC AL WIRE****:		816'
TOTAL LENGTH OF EGC*****:		204'

NOTES:
* AC CONDUCTORS: 25 FT IS ADDED TO THE HORIZONTAL RUN LENGTH TO ACCOUNT FOR BURIED DEPTH & TRANSITIONS.
** ESTIMATED LENGTH OF AL WIRE = SUM OF ESTIMATED LENGTH X 4 WIRES PER SUPERCHARGER
*** LENGTH = LENGTH OF AC AL WIRE PER CONDUIT X # OF CONDUITS
**** TOTAL LENGTH = SUM OF AC LENGTHS
***** TOTAL LENGTH OF EGC = LENGTH X # SETS

DC CHARGING POST LENGTHS			
SUPERCHARGER	CHARGE POST	LINEAR LENGTH	ESTIMATED DC WIRE LENGTH*
1	1A	75'	97'
	1B	63'	85'
	1C	54'	76'
	1D	45'	67'
2	2A	36'	58'
	2B	27'	49'
	2C	14'	36'
	2D	26'	48'
3	3A	49'	71'
	3B	58'	80'
	3C	67'	89'
	3D	76'	98'
CONDUIT LENGTH:		854'	
TOTAL CONDUCTOR LENGTH**:		3416'	
TOTAL LENGTH OF EGC & COMM CABLE:		854'	

NOTES:
1. ANY DC RUN OVER 340' SHALL BE BROUGHT TO THE ATTENTION OF TESLA CM.
* 22 FT IS ADDED TO THE HORIZONTAL RUN LENGTH TO ACCOUNT FOR BURIED DEPTH & TRANSITIONS.
** ESTIMATED LENGTH OF DC AL WIRE = SUM OF ESTIMATED LENGTH X 4 WIRES PER SUPERCHARGER

BREAKER TRIP SETTINGS	
2000A MAIN BREAKER (SET FOR 1600A): (ABB CAT No.: Z2SFUKBF20LA0000000XX)	
- Ir (LTPU) = 0.8	
- Tr (LT BAND) = CURVE D	
- Isd (STPU) = 8	
- tsd (ST BAND) = CURVE A (OUT)	
- li (INST) = 12	
- Ig (GROUND PICK UP) = 0.4	
- tg (GROUND BAND) = CURVE C	
600A SUPERCHARGER BREAKER: (ABB CAT No.: XT5HU360BBFN00HXXX)	
- INST. = MED	

SCOPE OF WORK			
UTILITY	GEORGIA POWER	TESLA	UTILITY
UTILITY	GEORGIA POWER		
CATEGORY	ITEMS	TESLA	UTILITY
PRIMARY	PRIMARY TRENCHING		X
	INSTALL PRIMARY CONDUIT		X
	INSTALL PULL ROPE		X
	PROVIDE PRIMARY FEEDERS		X
	INSTALL PRIMARY FEEDERS		X
	PROVIDE ROAD CUTS/ROAD BORES	X	
	PAVEMENT REPLACEMENT	X	
	INSTALL TRANSFORMER PAD		X
	PROVIDE TRANSFORMER		X
	INSTALL TRANSFORMER		X
TRANSFORMER	INSTALL CONNECTIONS-PRIMARY		X
	INSTALL CONNECTIONS-SECD		X
SWITCHBOARD	PROVIDE METER		X
	INSTALL METER	X	
SECONDARY	LAND SECONDARY FEEDERS	X	
	SECONDARY TRENCHING	X	
	INSTALL SECONDARY CONDUIT	X	
	INSTALL PULL ROPE	X	
	PROVIDE SECONDARY FEEDERS	X	
	INSTALL SECONDARY FEEDERS	X	
	PROVIDE ROAD CUTS/ROAD BORES	X	
	PAVEMENT REPLACEMENT	X	

- NOTES:
- CONDUCTOR LENGTHS ARE ESTIMATES ONLY. FINAL CONDUCTOR ROUTING PATH AND LENGTHS SHALL BE DETERMINED BY THE CONTRACTOR IN THE FILED BASED ON PHYSICAL MEASUREMENTS. CONTRACTOR TO ORDER CONDUCTORS BASED ON FIELD MEASUREMENTS (MUST BE APPROVED BY TESLA INSTALLATION MANAGER).
 - ALL ELECTRICAL WORK AND RELATED ACTIVITIES PERFORMED ON-SITE SHALL BE DONE IN ACCORDANCE WITH NATIONAL ELECTRIC CODE (NEC) AND UTILITY COMPANY STANDARDS.
 - NEUTRAL MUST BE INCLUDED FOR PROPER OPERATION OF TESLA SUPERCHARGERS.
 - ALL CONDUCTORS TO RECEIVE ANTI-OXIDATIVE COATING DURING INSTALLATION.
 - ALL EQUIPMENT SHALL BE HOUSED IN LOCKABLE, NEMA 3R ENCLOSURE.
 - USE OF DURALINE FOR SUPERCHARGER TO CHARGE POST DC CONDUITS IS AN APPROVED ASSEMBLY
 - DC RUN LENGTH MAXIMUM IS 340' INCLUDING BURIED DEPTH. ANY DC RUN LENGTHS OVER THE MAXIMUM SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF TESLA.
 - UTILITY EQUIPMENT INSTALLATIONS AND PREP WORK SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY ENGINEER AT TIME OF PRE CONSTRUCTION MEETING TO ENSURE ACCURACY OF INSTALLATION.
 - UTILITY CONDUITS, CONNECTORS, TRANSFORMER PAD & TRANSFORMER FOUNDATION TO BE INSTALLED PER UTILITY SPECIFICATION. CONFIRM LATEST SPECIFICATIONS PRIOR TO CONSTRUCTION.
 - EXISTING UNDERGROUND UTILITIES LOCATED WITHIN AREA OF PROPOSED TRENCH & EQUIPMENT SITE AREA. HAND DIG AND RELOCATE AS REQUIRED.
 - CONTRACTOR RESPONSIBLE FOR ALL TRAFFIC SAFETY MEASURES THROUGHOUT DURATION OF CONSTRUCTION. COORDINATE ANY ACCESS ROAD CLOSURES W/OWNER.
 - CONTRACTOR TO GROUND SYSTEM TO CONCRETE-ENCASED GROUNDING ELECTRODE PER NEC 250.50. GROUNDING RESISTANCE SHALL BE LESS THAN 25Ω PER NEC. CONTRACTOR TO ADD GROUND RODS TO SYSTEM UNTIL PROPER RESISTANCE IS MET.
 - THE DC BUS SHALL BE CONFIGURED IN A RADIAL FASHION WHERE ALL CONDUCTORS ROUTE FROM EACH 'TYPICAL' SUPERCHARGER CABINET, TO THE ONE, 'STAR-CENTER' SUPERCHARGER CABINET.
 - USE OF DURALINE FOR SUPERCHARGER TO CHARGE POST DC CONDUITS IS AN APPROVED ASSEMBLY. (SEE TUV CERTIFICATION ON SHEET E-2).

SECONDARY SERVICE LENGTHS		
TRANSFORMER TO SWITCHGEAR	44'	69'
TOTAL LENGTH OF AC AL WIRE**:	276'	
NUMBER OF WIRE SETS:	6	
TOTAL LENGTH OF AL WIRE***:	1,656'	

NOTES:
1. SEE SHEET E-2 FOR WIRE CONFIGURATION.
* AC CONDUCTORS: 25 FT IS ADDED TO THE HORIZONTAL RUN LENGTH TO ACCOUNT FOR BURIED DEPTH & TRANSITIONS.
** ESTIMATED LENGTH OF AL WIRE = SUM OF ESTIMATED LENGTH X 4 WIRES PER SET
*** LENGTH OF AL WIRE PER DISCONNECT = ESTIMATED TOTAL LENGTH OF AL WIRE X # WIRE SETS



DRAWN BY:	WG
CHECKED BY:	DSW
APPROVED BY:	MCS
PROJECT #:	50123704
JOB #:	50163344

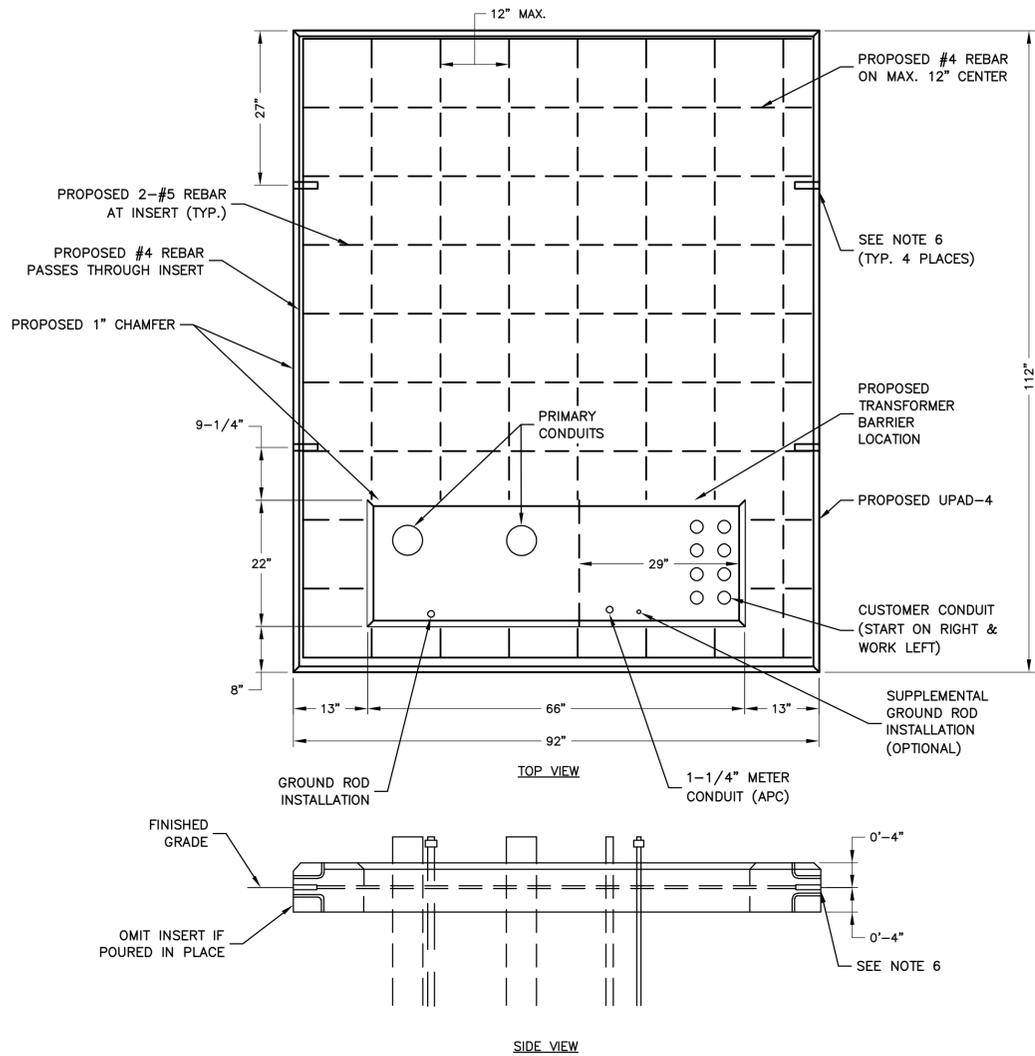
SUBMITTALS		
REV.	DATE	DESCRIPTION
0	05/26/23	ISSUED FOR S&S
B	05/17/23	ISSUED FOR 90% REVIEW
A	05/09/23	ISSUED FOR 90% REVIEW

SITE NAME:
DULUTH, GA - PEACHTREE INDUSTRIAL BLVD (TRT ID: 27314)

SITE ADDRESS:
2220 PEACHTREE INDUSTRIAL BLVD
DULUTH, GA 30097

SHEET TITLE
ELECTRICAL ONE-LINE DIAGRAM

SHEET NUMBER
E-1



PRECAST OR Poured IN PLACE CONCRETE PAD FOR 3 PHASE PAD-MOUNTED TRANSFORMER, 12 KV THRU 25 KV PRIMARY VOLTAGE, 500 KVA TO 2500 KVA RADIAL STEP-UP/DOWN, 500-3750 KVA LOOP FEED

TRANSFORMER PAD

SCALE: 3/8"=1' FOR 11"x17"
3/4"=1' FOR 22"x34"



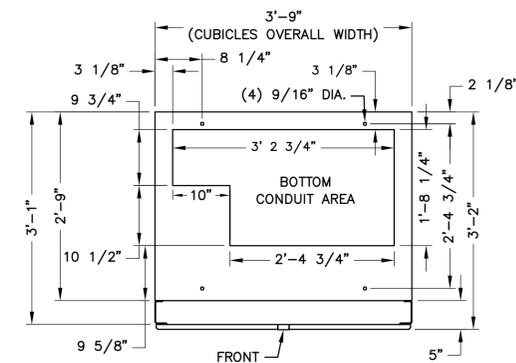
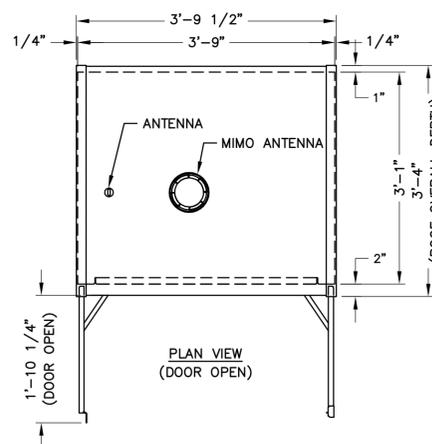
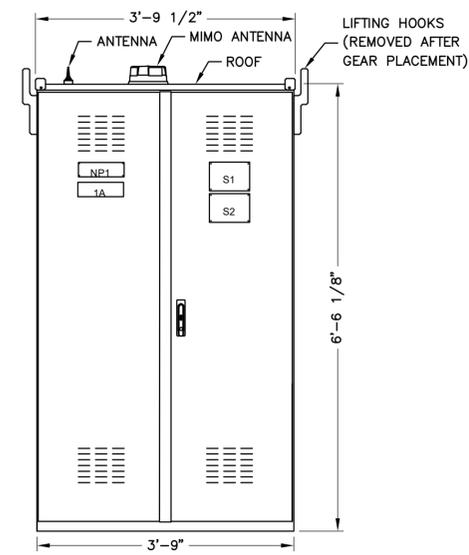
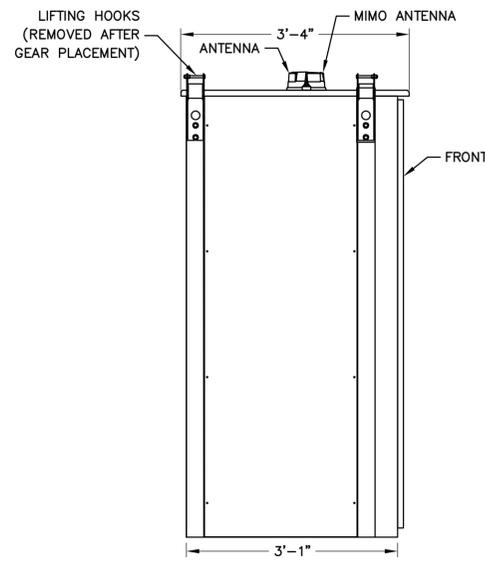
UTILITY NOTES:

1. MAINTAIN 2 IN. OF CLEAR CONCRETE BETWEEN REBAR AND ALL OUTER SURFACES.
2. REINFORCE WITH No 4 REBARS WITH 12"x12" GRID, 4 IN. BELOW TOP OF PAD EXCEPT AS SHOWN ABOVE.
3. CONCRETE SHALL HAVE A MINIMUM ULTIMATE 28 DAY COMPRESSIVE STRENGTH OF NOT LESS THAN 3,000 PSI, PAD SHALL BE CURED NOT LESS THAN 72 HOURS.
4. AVERAGE WEIGHT OF PAD IS 5,800 POUNDS.
5. MOUNTING SURFACE SHALL BE LEVEL, SMOOTH AND UNIFORM WITH MINIMAL IRREGULARITIES.
6. LIFTING INSERT FOR 1 IN. DIAMETER THREADED BOLT, 4" DEPTH, MEADOW BURKE FX-14, 4 LOCATIONS (OMIT IF Poured IN PLACE).

* 66" OPENING INCLUDES CHAMFER.

NOTES:

1. SPECIFICATION BASED ON GEORGIA POWER SPECIFICATION A-SUH16001 PRECAST OR Poured IN PLACE CONCRETE PAD FOR 3 PHASE PAD-MOUNTED TRANSFORMER.
2. CONTRACTOR TO VERIFY APPROVED VENDORS W/ UTILITY IF ORDERING PRECAST FOUNDATION.
3. CONTRACTOR TO CONFIRM LATEST SPECIFICATIONS W/ UTILITY PRIOR TO CONSTRUCTION OR ORDERING.



1600A EV-2 MCB SWITCHBOARD

SCALE: 3/8"=1' FOR 11"x17"
3/4"=1' FOR 22"x34"



3500 DEER CREEK ROAD
PALO ALTO, CA 94304
(650) 681-5000



Dewberry Engineers Inc.
2835 BRANDYWINE ROAD
SUITE 100
ATLANTA, GA 30341-4015
PHONE: 678.530.002
GA LIC. NO. PEF002398 (6/30/2024)



DRAWN BY: WG

CHECKED BY: DSW

APPROVED BY: MCS

PROJECT #: 50123704

JOB #: 50163344

SUBMITTALS

REV.	DATE	DESCRIPTION
0	05/26/23	ISSUED FOR S&S
B	05/17/23	ISSUED FOR 90% REVIEW
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SITE NAME:
DULUTH, GA - PEACHTREE
INDUSTRIAL BLVD
(TRT ID: 27314)

SITE ADDRESS:
2220 PEACHTREE INDUSTRIAL BLVD
DULUTH, GA 30097

SHEET TITLE
**ELECTRICAL & UTILITY
DETAILS**

SHEET NUMBER
E-2



3500 DEER CREEK ROAD
PALO ALTO, CA 94304
(650) 681-5000



Dewberry Engineers Inc.
2835 BRANDYWINE ROAD
SUITE 100
ATLANTA, GA 30341-4015
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DRAWN BY:	WG
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SUBMITTALS

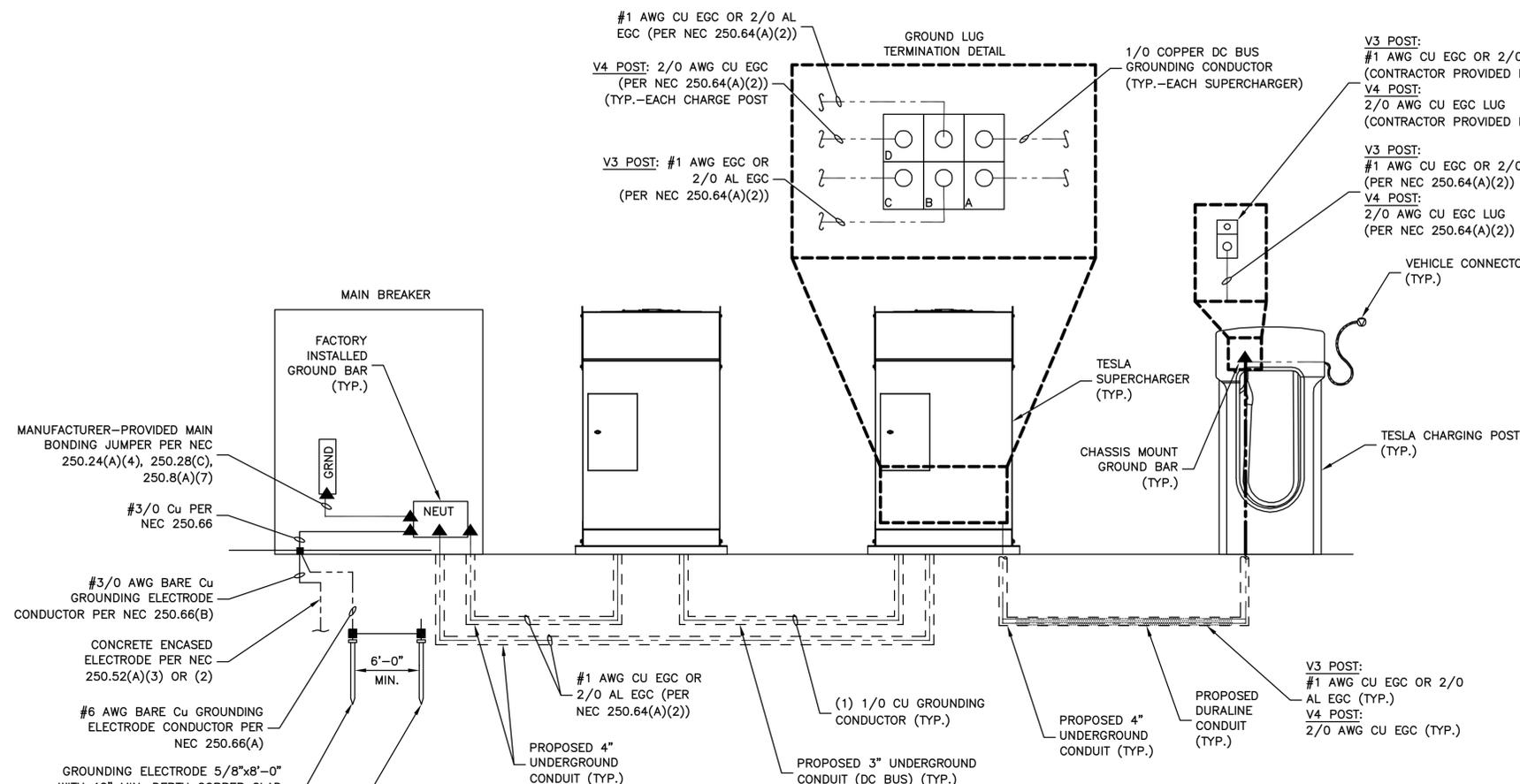
REV.	DATE	DESCRIPTION
0	05/26/23	ISSUED FOR S&S
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SITE NAME:
DULUTH, GA - PEACHTREE INDUSTRIAL BLVD
(TRT ID: 27314)

SITE ADDRESS:
2220 PEACHTREE INDUSTRIAL BLVD
DULUTH, GA 30097

SHEET TITLE
**GROUNDING PLAN,
SCHEMATIC & DETAILS**

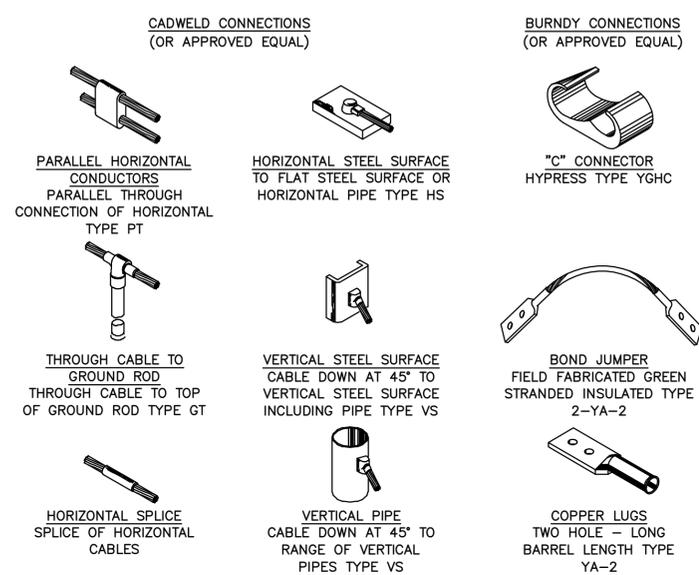
SHEET NUMBER
G-1



GROUNDING SCHEMATIC

SCALE: N.T.S.

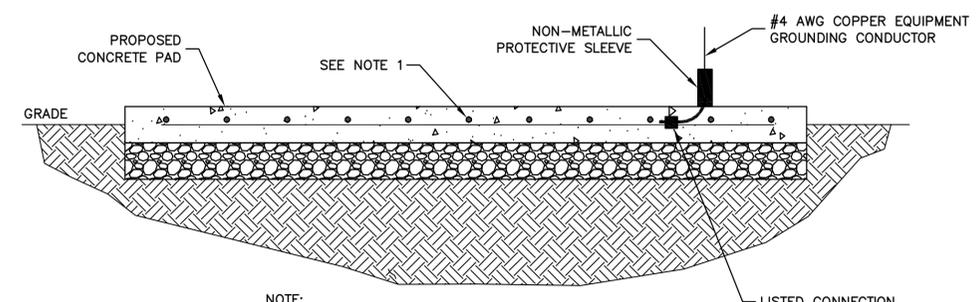
1



GROUND CONNECTION DETAILS

SCALE: N.T.S.

2



NOTE:
1. REBAR BONDED TOGETHER WITH STEEL TIE WIRES.

CONCRETE ENCASED ELECTRODE DETAIL

SCALE: N.T.S.

3